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AMERICAN FARMHOUSES.

WHEN Hamlin Garland, some years since, published his tales of Western prairie life, the impression of hard, grinding, thankless poverty and dreary, hopeless surroundings, which he depicted, brought home to many of his readers the realization of conditions which are but too often ignored. Agriculture in itself is one of the noblest of callings, and the farmer is almost the only producer in the Commonwealth who is self-supporting; and yet the average farmhouse is a most dissolutely dreary and artistically barren habitation, and Mr. Spencer's paper on the subject, in this issue, ought to arouse a deeper appreciation of the possibilities of agricultural architecture. Theoretically, farm life is all that is ideal, and the open air existence is the charming return to nature for which we all sigh; and if our farmers could be induced to give to the construction and adornment of their houses but a tithe of the thought and the money which is lavished in many cases upon the barns, stables, and pig pens, there would be no cause to complain of the habitations of the American husbandmen. Mr. Spencer views the subject from the standpoint of the artist as well as the architect. The possibilities of the farmhouse appeal to him as they should appeal to the inhabitants, and he is able to show that it is not necessary to endure the frightfully uninteresting and almost hopelessly commonplace structures which are now the rule, but that the fifteen thousand well-built, comfortable, roomy houses of wood, brick, and stone ought, for every reason, to multiply until the six million flimsy, wooden farmhouses have shrunk to the limitations only of the persistently shiftless farmers. Our readers doubtless recall the very pointed story by Mary E. Wilkins, published a few years since, of how a determined farmer's wife forced her husband to provide for her a shelter at least as good as that he offered his horses, showing how "the Revolt of Mother" brought about a regeneration of the farm architecture. Mr. Spencer has made a special study of the American farmhouse, and he has brought to it an appreciation and a degree of talent which has given promise of most excellent results. It ought not to be difficult to evolve a more rational, more artistic, and more hygienic treatment of our farmhouses. It is at root quite as much ignorance as lack of artistic appreciation which permits our farmers to be content with what they have, and once we can get them aroused, once they can be made to feel that a well-built brick house is cheaper, more conducive to health, more lasting, as well as better looking than any of the wooden structures, such as are now the rule, it will not be difficult to predict the numbering of the days of the prairie shanty. Every other country in the world builds interesting farmhouses. We did once, as Mr. Spencer's illustrations show, and now we must turn around, and if we do not revert entirely to the fashion of our New England forefathers, we can, at least, take a measure of their spirit and put it into permanent forms of masonry construction, such as were very often beyond the reach of any but the richer colonial farmers, but are now possible for every one.

Burnt clay, as a material for farmhouse construction, has everything to recommend it. It is comparatively unknown here for the reason that, up to twenty or twenty-five years, it was in many parts of the country a more expensive material than wood. But any traveler through Holland, through the rich valley of the Po, or through the central counties of England can testify to the prevalence of brick farmhouses; and surely if the peasants of those countries are able to build picturesque and rational brick farmhouses, there is but slight excuse for the free farmers of our own country.

Example, after all, is a better teacher than precept, and it is hoped that the competition for the design of a brick farmhouse, which appears in this number, will bear its part in developing possibilities. When our bright young architects want to amuse themselves with a pastime sketch, it is more apt to take the form of something rural than civic, and a farmhouse is more apt to appear under the facile pencil than an arch of triumph. The

problem is certainly fascinating enough, and it ought to have called out very interesting sketches.

WHAT IS AN ARCHITECT?

IN a recent number of the *Inland Architect and News Record*, there was a very interesting editorial on what the modern architect should know. We agree thoroughly with the editorial in its main points, but we would take issue on the idea that the paths of the architect and engineer cross, and that it is necessary for an architect to be primarily, or even largely, of an engineering bent of mind. The *Inland Architect* states that older architects are aware it is not usually difficult to obtain draughtsmen who are, or say they are, artistic, but that it is difficult to find those who are competent to lay out in a proper and capable manner the details of any considerable structure. Our own experience has been directly the contrary of this. It is rare that a draughtsman can be found who can be trusted with any considerable degree of artistic license in designing a building. The real architecture, by which we mean the design as distinct from merely practical considerations, is the hardest part of the whole problem to solve. We never have found any lack of thoroughly competent draughtsmen with engineering tendencies, who could be safely entrusted with a very wide latitude in the designing of a structure. An architect is obliged to possess a wide range of knowledge and experience, and he must know and thoroughly understand the mechanical and engineering details of his profession, but this part can be acquired by any one with due diligence and application; whereas the finer qualities of design result not merely from years of serious training, but also from the possession of that intangible something which we may call genius or inspiration, but without which no architect can be really successful. If the architect undertakes to compete with the engineer on his own ground he will be beaten hands down, but it will be a sorry day for the art of this country when engineering considerations are to take precedence of pure design; and our advice to a young man would be first and always to study design, beauty, purity of line, fitness of material, and, if he is a man of only ordinary mental endowment, he need have no difficulty in solving nearly all the engineering problems associated with the largest buildings, and the few such problems which would be too much for him would be of a nature which he ought to place in the hands of a competent engineer in any case.

STEEL IN SMALL BUILDINGS.

ANY one who has had occasion to familiarize himself with the construction of dwellings in the larger European cities cannot fail to be impressed with the extent to which steel and masonry are used therein as compared with what is the practice in this country. The last few years has seen an enormous expansion in the use of steel for public buildings, but we have not yet reached a point where the building public appreciates the necessity for masonry constructions in dwelling houses, at least not in dwelling houses outside of the solidly built lines of the principal streets. We believe the time is fast coming, however, when the advantages of a combination of steel and brick will appeal to our constructors to an extent which will create as great a revolution in the methods of private construction as has taken place already in our commercial work.

THE PALAZZO DEL POPOLO, ORVIETO, ITALY.

SOME eighty miles north of Rome on a great isolated tufa rock stands the mediæval town of Orvieto. The perpendicular sides of the plateau rise, streaked and stained with the gorgeous colors of age, above the level valley through which runs the railway to Rome. A remarkably steep cable tramway conveys the passengers from the station to the top of the plateau, landing them at the entrance of the winding main street of the ruinous old town. Such tourists as stop at Orvieto are generally attracted by the splendid cathedral and its works of art, and few find it to their taste to pass more than one night in the old hill town. The houses, built of the coarse, black volcanic stone, many of them windowless and dropping to decay, the repulsive filth of the alleyways, and the somewhat sullen looks of the population contrive to give Orvieto a gloomy and forbidding appearance. Squalor and emptiness are seldom picturesque; merriment and color are found more in crowded populations than in those decimated by poverty.

This dilapidated condition of Orvieto is expressed in the photograph of the rear of the Public Palace, which we present this month as our frontispiece. The massive and time-stained walls, which, with their yawning openings, frame the disheveled heads of the motley population harbored in these rooms which have been the stronghold where many a potentate and civic dignitary has upheld the honor of Orvieto, are characteristic examples of the construction of most of the city.

Little is left of the original architecture of the Palazzo del Popolo, except the splendid row of triple windows, with their delicate columns and tracery, and curiously decorated archivolt which spans the entire motif. The great archway extends through the building, and on the front side nearer to the main street there is a flight of broad steps leading up to a balcony, as was common with Italian municipal buildings. The coarse character of the masonry is clearly indicated by the photograph. The building was erected during the twelfth or thirteenth century, and although much ruined is an interesting link in the chain of famous Italian town halls.

Aside from its dilapidated state, Orvieto is a place which the traveler, in search of impressions, will hardly care to miss. The imposing mass of its craggy plateau, as it first comes into sight from the train, the flight upwards on the funicular tramway with picturesque peasants and market women, the entrance through the black tunnel under the fortress, the interminable main street which has to be traversed to find the inn — then the inn itself with its vast brick-paved bedrooms and gloomy halls, whose depressing effect is, however, happily neutralized in the dining room by the copious flasks of the good red wine of Orvieto, which adorn the tables, — all these contrast with the cathedral façade, blazing with mosaic, and the gorgeous sunsets which stream over the level valley and old Etruscan city, rich with its memories of over a score of centuries.

American Farmhouses.[1]

BY ROBERT C. SPENCER, JR.

THE student of rural domestic architecture must be content to find his pleasure chiefly in the enjoyment of field and woods. The average American farmstead, and its weather-beaten, ramshackle, wooden buildings and unkempt surroundings, adds but a doubtful charm to the landscape. The fine old relics of colonial days, which still exist in New England and the South, were the country seats of gentlemen who had other resources than the soil. They were not farmhouses. Outside their own provincial environment they have not even served as prototypes for the homes of the real farmers whose acres are their sole support.

Disregarding such pioneer makeshifts as the log cabin, the "dug-out" and the "dobe" hut, we have, in the United States, a vast territory presenting every diversity of climate, topography, and vegetation, over which is thinly scattered some six million flimsy wooden farmhouses. Besides these, in the older and richer farming communities, there may be, all told, possibly fifteen thousand well-built, comfortable, roomy houses of wood, stone, or brick, which have some characteristic architectural or pictorial charm, adding color and pleasing inter-

FARMSTEAD NEAR TOPSHAM, ME.

est to their natural environment, and offering suggestion and inspiration to the architect.

Even in the rich farming sections of the older States, there are many rural habitations so brutally bald, ugly, and forbidding that it may be said of our own benighted heathen, still deaf to the gospel of beauty, that they live in a land "where every prospect pleases and only man is vile."

Amid the freshness and beauty of the fair open country, one cheerless or unsightly house seems, by contrast, more discreditable to a highly civilized and progressive race than a whole row of them in a city.

Poverty and struggle are not alone accountable for poor housing. Many a countryman who is well-to-do, even wealthy, lives in the most primitive and comfortless fashion. The average farmer, more especially in the rougher parts of the South and West, does not know how to live. He and his, toil hard and get little of the higher side of life in return. Having the same social instincts and needs as other men, he isolates himself in the midst of a large tract of land, and during the long winter months, when there is little outdoor work to do, he and his unfortunate family are often shut in like hermits, and cut off from convenient intercourse with their fellows, to drag out a dull, depressing, animal existence amid bare and ugly surroundings. Often the children cannot even attend school. In most European countries, — doubtless, as a result of the feudal system, — where for mutual support and defense the homes of the serfs and dependents were grouped near the manor or castle, the lonely isolated farmhouse is less common. In France, England, Russia, and Scandinavia the owners or workers of a number of farms group their houses in a little ham-

OLD SHINGLED BARN, PHIPSBURG, ME.

let with its school, its church, and its smithy, going out in all directions each morning to the distant fields or vineyards, and returning at dark to chat awhile after the evening meal with friends and neighbors, talking politics or indulging in mild gossip.

The same communal arrangement was forced upon our early New England settlers by the hostilities of the Indian tribes, and on the outskirts of the smaller cities and towns still remain many delightful examples of Colonial farmhouse architecture. But with the banishment and subjugation of the Indians, and the beginning of the era of settlement upon government lands, with its requirement of five years' actual residence thereon before title could be established, the lonely isolated farmhouse became common. In the "Western Reserve," in the South, and in Michigan and Wisconsin it was at first built of logs. Farther west on the prairies it was a cheap shelter built of pine lumber or merely a sod house constructed from the humble material nearest at hand. On the Pacific slope, with its kindly climate, the simplest and rudest housing sufficed. These were the homes of the

FARMHOUSE NEAR LA GRANGE, ILL.

pioneers. The day of the log house is passing, and the sawmill has long been at work devouring the forests for lumber to ship to farms cleared originally in the midst of the virgin woods. The sod house and the "shack" are but temporary makeshift shelters, and the cheap frame house is taking their place to remain until the era of wood makes way for the era of brick and stone.

[1] Copyrighted by Robert C. Spencer, Jr.

FARMHOUSE ON KENNEBEC RIVER BELOW BATH, ME.

Each generation will see better and more substantial buildings on our farms; but while the present system of single isolated habitations so widely prevails, the old difficulty of keeping the boys on the farm will remain, and there will be no little diminution in the stream of fresh blood which the cities, vampire-like, draw from the country. And never was there greater need than now to make rural life attractive to the children of the farms. The glimpses of the great, alluring world, gotten through visits to the nearest towns, through study at school and the reading of books and papers, impel the restless, eager youth, weary he knows not why, not of the mere grind of toil, but of the heart and soul starvation that is part of a life without recreation or beauty. The country is not everywhere beautiful. Amid the hills of New England, or the mountains of Tennessee, the rudest mind is

SKETCH BY R. C. SPENCER, JR.

conscious of nature's loveliness. But what of the endless sweep of prairies where even the wild-flowers, by endless multiplication, become as weeds, and the horizon line is broken only by a few farmsteads with their straw stacks, windmills, and puny trees? As seen from a railway train the prairie farmhouse is as lonely as a passing craft at sea. The shimmering corn fields and floor-like meadows stretch away to the horizon's circle, and the farmsteads, with their clumps of trees, are like islands dotted wide upon a boundless ocean. There is a certain vastness and freedom there as of the sea, but the great everlasting flatness has no feature of interest, no focal point of natural beauty or grandeur to rest the eye. There is, indeed, the beauty of the skies, and the play of light and shadow, sunshine and storm, over the great level. The rain passes, and in the west a rifted cloud opens at the touch of one slant ray, and far out upon the gloomy plain a golden finger touches the earth, and a windmill gleams wet against the rumbling darkness, as the thunder rolls and the tassels of the corn bow gently before the dying wind.

Winter comes, and the prairie is a frozen waste, across which the bitter winds drift the stinging snow-dust, until every flimsy, wooden farmhouse shivers on its foundation, if, mayhap, it have any foundation better than posts driven into the ground and a banking of dirt and leaves. When the thawing weather comes the unspeakable roads of bottomless muck stand out black against the surrounding snow, and travel is well-nigh impossible. And the homes themselves, — what do they offer of comfort and

SKETCH BY R. C. SPENCER, JR.

beauty? We all know them, and the helpless poverty of ideas expressed by the average farmhouse. It is just one degree smaller and cheaper and more cheerlessly commonplace than the average mean little house which the speculative builder "puts up" in the humbler suburbs for poor clerks and working-men.

It has never occurred to their builders that even at the very small outlay to which the average farmer is confined, some pleasing effects of proportion and mass might be got, more lasting and beautiful materials used, more interior comfort and more domestic conveniences planned for. The women of the household, particularly if they are of foreign origin and peasant antecedents, are literally hewers of wood and drawers of water. The pump has replaced the well with its old oaken bucket, but the pump is out in the yard and not in the kitchen.

SKETCH BY R. C. SPENCER, JR.

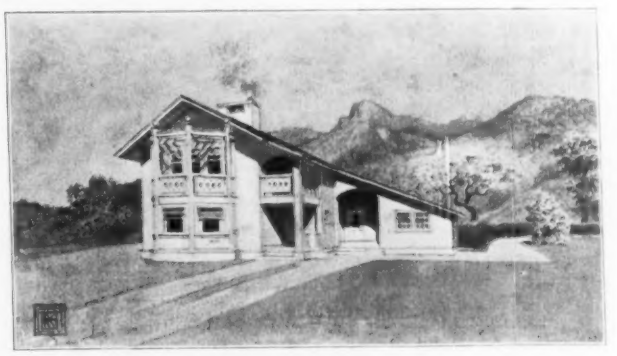
A SOUTHERN FARMHOUSE.

Sinks are luxuries for the few. Dish water is thrown out near the kitchen door. Probably not more than one farmhouse in twenty has a furnace or a plumbing system of any kind. In nearly every house, and this is equally true even in New England and in the thriftiest parts, one sacred room is dedicated and set apart to fashion and ceremony. It is the "parlor" idea, which runs through all modern domestic architecture, expressed here in a peculiarly absurd yet pathetic form. Shut up, unused, and frigid, except on rare occasions, musty with disuse, and its walls ghastly white or covered with some poor, pale paper, a few chromos and faded photographs in hard black frames, and all of the other evidences of poverty of taste and imagination, the so-called "best room" is cut out of the already modest ground plan, leaving the family to live in kitchen and dining room, and to eat in the former oftener than in the latter, where the atmosphere reeks of coarse cookery, stale tobacco, and dirty boots and clothing brought in by the men from the fields and barns.

Of sanitary, bathing, or laundry conveniences there are usually none. Thousands of farmers have never heard of such things. Thousands who have heard of them and might afford them scoff at them. Housework is drudgery at all times, and during haying and harvest it is slavery. The pictures given in some of our recent fiction of hard grinding farm life with few touches of softness or beauty to relieve them are not too darkly drawn. Picture to yourself the boyhood life of a David Harum. The fiction of Hamlin Garland, Mrs. Peattie, and E. V. Smalley gives no exaggerated impression of actual and common rural conditions, where farms are isolated and the struggle against poverty is endless and bitter.

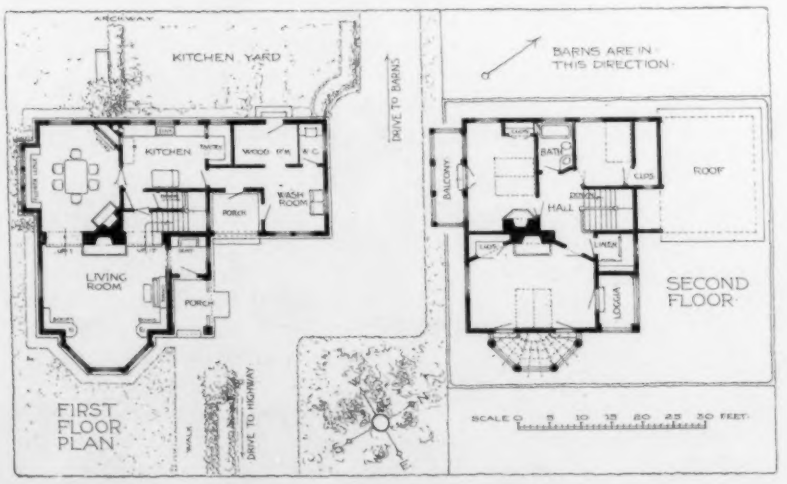
The Esquimaux Indian with his wood and bone carving, his basket-weaving, and implement-making has more to occupy and develop his creative faculties than the toilers of the prairie in whom the love of beauty and the desire to create gradually die; where the lively imagination of childhood is starved and dwarfed by the hard reality of a one-sided material existence. To one of those warped and undeveloped natures art is a strange and foreign thing, to be mistrusted and shunned because not understood; because enjoyed and patronized by the favored rich and the idle-born; a thing for weak women and lazy men.

From infancy the child of the farm must be taught to truly see form and color, the mind to understand, the imagination to create, and the hands to do for the pure pleasure of doing. In the country isolation must cease,



A SOUTHERN FARMHOUSE.

houses must draw together about the schoolhouse as a center, and there must the children have the beneficent teaching of the kindergarten, the spirit of which should not be withdrawn as the pupils pass from childhood, but should pervade all the years of schooling. Loving beauty, knowing its value in life, sensitive to its myriad forms, the farmer of the future will then value beautiful surroundings as well as bountiful crops. Realizing the benefits and advantages of combination and cooperation, he will work intelligently for the development of little communities, wherein, by united effort, comfort and conveniences of living, now rare, may be enjoyed by all. On the industrial side of his calling he will perfect such combinations of capital and of business interests as to make the earning of an independent and comfortable living a certainty for the reasonably careful and industrious. Trusts and the "plutocrats" will no longer be his bugbears, and his sons will no longer seek the city in search of uncertain fortunes. Among the factors working toward these improved conditions of rural life are the efforts of educators to improve country



PLANS, SOUTHERN FARMHOUSE.

schools, and to make them more available to the farming population; the spread of the grange idea promoting social intercourse, mutual improvement, and the cooperative idea; the establishment in the most progressive States, of farmers' institutes as a phase of State university extension; the good roads movement and the work of agricultural schools and colleges.

Finally, hundreds of thousands of agricultural and family papers are sent broadcast among the farmers every week, reaching many humble homes where the illustrated magazines are never seen and books are few. Some of these have well-edited columns on the arts and handicrafts, and several of the leading farm and family journals have taken up the farmhouse problem in a way which ought to do much good to awaken their subscribers to the neglected possibilities of rural life in respect to the home and its environment.

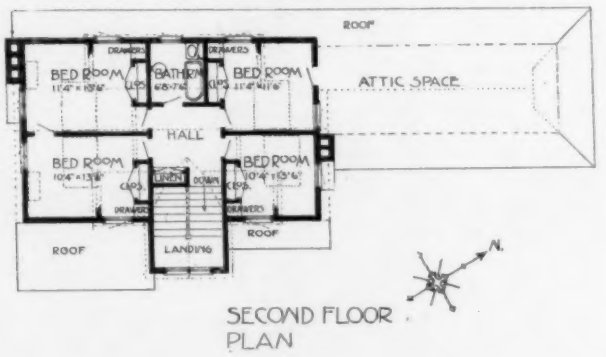
Doubtless the majority of those to first feel the force of these pleas for better homes will be the wives and daughters. In time the sterner males will yield to good and persuasive influences; and when once the movement for a really good rural architecture has begun, they may be expected to take quite as much pains to comfortably house their families as to properly shelter stock and machinery. Up to the present time the typical American country barn has been better planned and better built than the average farmhouse. In the building of barns and outhouses, as well as the construction of labor-saving agricultural machinery, Yankee skill and brains have evolved a type which, from a purely practical standpoint, is superior while it lasts to the better-built foreign models of brick and stone. Unhampered by any fear of being accused by neighbors of foolish extravagance in building as long as the ends sought are purely "practical," without taint of æsthetic "foolishness," or weak catering to needless refinement of living, the farmer as a barn builder has been progressive and ready to spend money within the limitation of wooden construction and according to his means. It is in the matter of the house that he has signally failed. Here his intense natural conservatism, joined to force of habit in crude ways of living, has stood in the way of progress. The journals he takes have always dwelt chiefly upon the practical details of his business, leaving the home itself, the center and soul of the farm, to the rude hands of the ignorant, unprogressive country builder. Of recent years, with the perfection of cheap methods of photographic reproduction, the country has been flooded with ready-made designs for houses of every size and cost, planned for all sorts and conditions of men except farmers. These designs are most of them so bad that it would be fortunate if the country people had escaped their blighting influence. But in the hands of the village builder they are made, with some changes in the line of cheap construction, to serve for the new homes of the wealthier and more ambitious farmers. We have all seen these fearful and wonderful structures with their ridiculous little towers and turrets, or their now antiquated mansard roofs and cupolas, betokening the exceptional prosperity and munificence of the owners. Begotten by blind custom, conceived in a commercial spirit and born of commonplace mediocrity, there is little hope for the cause of a progressive, living, native, domestic architecture in these piles of plans and elevations run off by the yard by men who care little or nothing for architecture as a fine art. The small minority of our architects who are able to design well-planned, livable, and thoroughly delightful farmhouses are as a rule too constantly and profitably employed with large and important commissions to be interested in the sort of building to which the humble means of even the wealthier farmers would confine him. So that unless the devil is fought with fire and the best

A WISCONSIN FARMHOUSE.

ideas of our ablest designers and thinkers are placed in the hands of the farm people, the illiterate and unscrupulous plan-merchant, who never lets art interfere with business, will continue to be the only architect the farmer knows until there is a larger and more intelligent demand for beauty in the home and its surroundings.

A WISCONSIN FARMHOUSE.

In our present intensely commercial period the village carpenter is no longer the painstaking student of the most dignified architectural precedent, as he often was in colonial days. He makes plans in order to get "jobs," and gets all the money he can out of them. In New England, until recently, the traditions of earlier days have been followed in a humble way in farmhouse work; but now, even there, the same beastly "modern" abominations of the lathe and the band-saw are beginning to appear in all their brazen impudence.



PLANS OF WISCONSIN FARMHOUSE.

In presenting some of my own designs for American farmhouses, as suggesting a few of the possibilities which the problem offers to the architect, a very few words of explanation will suffice. The "Fieldstone Farmhouse," the "Wisconsin Farmhouse," and the "Southern Farmhouse" (planned for the more temperate Southern regions) were recently published in two well-known farm journals, and have also appeared in several of the late architectural club catalogues and in *Brush and Pencil*. They were intended for rather small families, keeping not more than one servant, and would require the male help in some cases to occupy separate quarters near by, this being a good plan on very large farms where several hired hands are steadily employed. One or two men may be accommodated in the house, and would commonly be treated as members of the family, where help of a superior class can be had.

The only saving in labor and expense made possible by providing extensive quarters for help in part of a farmhouse is in heating them in winter, although even here a central steam or hot water apparatus instead of a hot air furnace would wipe out even this consideration. In the average Northern farmhouse neither the man's room nor the family bed rooms have any proper provisions for heating. Moreover, in mixed communities, or where rough, menial, or uncongenial help has to be employed, the family life is much better and freer where the

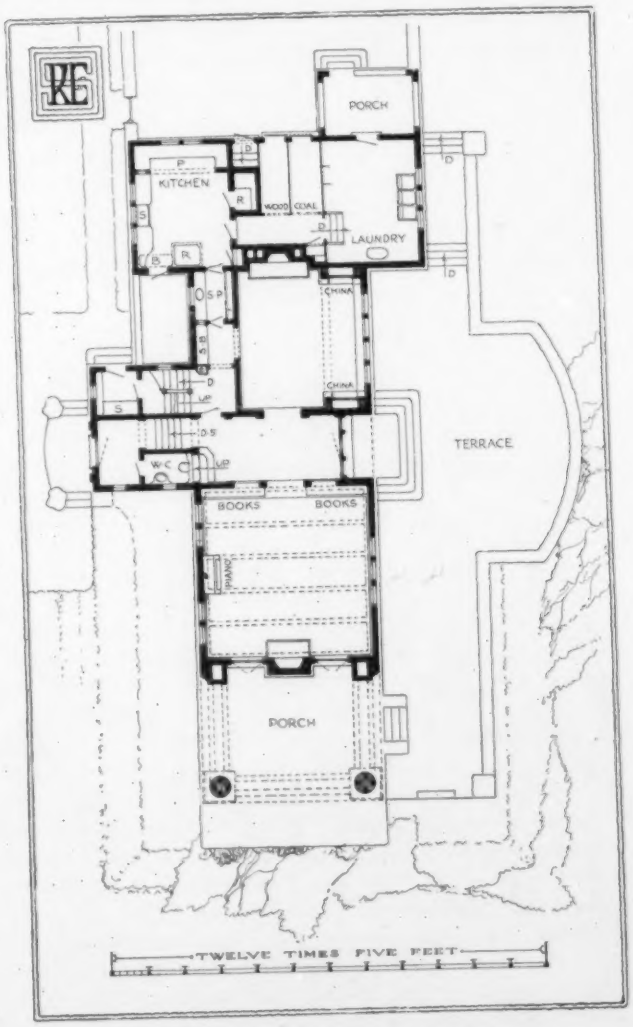
A LAKESIDE FARMHOUSE.

hands are cared for separately. There are ideal American farming communities where as many as half a dozen hired men and boys, friends or relatives of the patriarchal employer, sleep and eat together, under one roof, in the most congenial and democratic fashion, — all equals and all good, wholesome, intelligent members of one big family, in which all cooperate for the general good. Such big families require generous housing, but are the exception rather than the rule. For hired help under such conditions, a separate wing with bed rooms on the ground floor, readily increased by lengthening or adding a second story, or both, as growing needs require, seems to be the best arrangement. A one-story house gives a large attic, which, if properly lighted and ventilated, also affords generous sleeping accommodations, which may be reached by a staircase direct from the entry by the men whose goings and comings would otherwise often disturb the family. The "Lakeside Farmhouse" was designed for one of those ideal situations of which architects love to dream, and which do actually exist in many parts of America. The building is intended to accommodate several boarders or city relatives during the summer, and suggests the country house rather than the ordinary farmhouse. The separate entrance for hired help with an enclosed staircase gives them a private thoroughfare to their rooms in the attic, where rough or menial help is employed. This drawing was made primarily to show the possibilities of beautiful farmhouse sites. The "Wisconsin Farmhouse" presents the pleasing low roof lines of the story and a half cottage, yet avoids the practical shortcomings of that type; the floor beams overhang to receive the rafter thrust, while the bed rooms each with windows in two walls carried close to ceiling and fitted with casement sash give the best possible ventilation, and insure cool rooms at night if there be any air stirring. The kitchen is simply a large alcove in the dining room. This compact arrangement completely screened from the living room makes the work very simple, everything being within easy reach; while any steam or fumes from the cooking range are cut off by a low arch about 6 ft. above the floor, and drawn off by a large ventilating register in the chimney. The rear porch may be enclosed with wire screens and meals served there in hot weather and on gala occasions, or where family and help do not mix at meals; the living room readily becomes dining room as well.

In the library or office, quiet and privacy may be had for study, correspondence, receiving friends, keeping farm and household accounts, and transacting farm business.

With the exception of the Fieldstone Farmhouse in which brick might be used quite as effectively as stone, the construction is of the balloon frame type, with a covering of cement rough cast on metal lath. With some slight modifications each could be built of brick, and thereby made more durable and beautiful at a small increase of cost, which would be fully offset by the substantial and permanent character of the house thus obtained. The days of the flimsy, "clapboarded" frame house are numbered, and it is to be hoped that the farmers who seem to prefer bricks wherever they can be cheaply obtained will realize that solid brick construction, proof against weather, growing mellow rather than dilapidated with age, is the best investment in the long run.

The other illustrations, mere camera notes, present interesting and typical examples of native American, rural architecture. Note the picturesque homeliness of the northern New England type — the best built and the most clearly defined and, perhaps, the best suited to Northern conditions. Here, and occasionally in the West where New Englanders have settled, the typical farmhouse is a long rambling structure, with the sacred "parlor" and guest room at one end and the barns and workshop at the other. In Northern regions where old-fashioned winters with deep drifting snows still reign,



FIRST FLOOR, LAKESIDE FARMHOUSE.

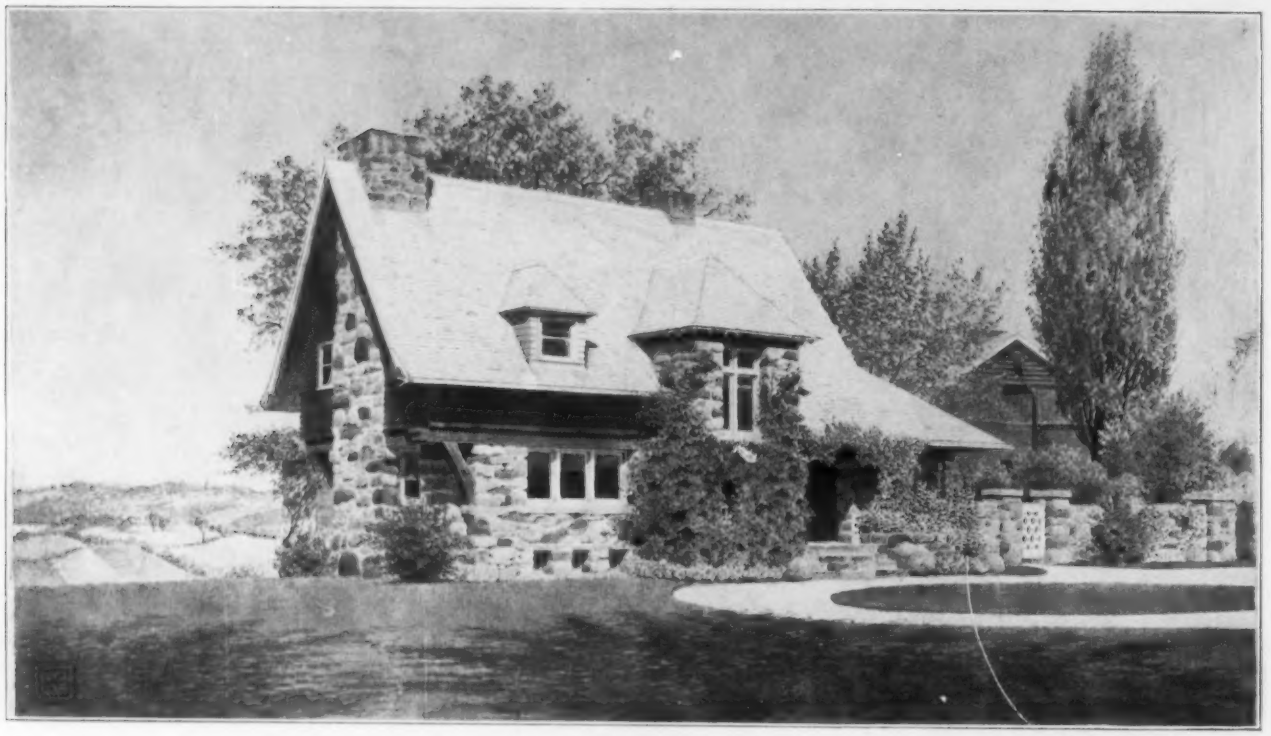
A LAKESIDE FARMHOUSE.

the convenience and comfort of this type are obvious. Of course, a separate and larger barn for stock is usually required, although examples may be seen where, through various sheds, a house is united with a great barn, large enough for all purposes. A few changes in the plans of these rambling farmhouses would eliminate the most serious defects now found in even the best of these buildings. These defects, some of which are due to perverted ways of living, are: first, a connection between kitchen and barn too short or inadequately shut off against odors; second, incomplete or inconvenient laundry, fuel, pantry, and other working arrangements; third, lack of bath room and sanitary conveniences; fourth, and perhaps most serious of all, lack of a large, sunny, attractive living room or combined dining and living room in place of the frigid, old-fashioned state parlor held sacred to memorable occasions, such as weddings and funerals. One needed feature, seldom provided, is a roomy entry, set apart for the male members of the household in which they may remove dirty boots and overalls, and clean themselves up properly before entering the kitchen or living rooms. Often toilet and wardrobe conveniences may be provided in the laundry.

In planning and placing a house in a sharply rolling country, such advantage of the site often may be taken as to provide easy and convenient access to the house and barn on two levels, giving an added charm to its various aspects seldom found in the level prairies.

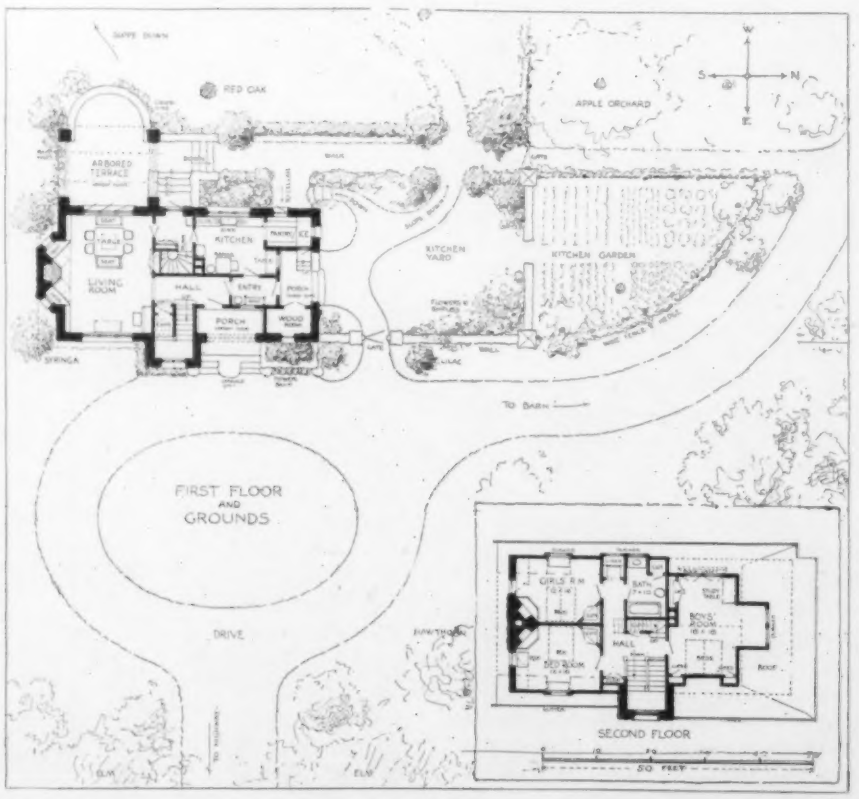
Concerning the use of brick in the construction of American farm buildings, there is little to be said for the reason that the cheapness and availability of wooden construction have been sufficient cause hitherto for the almost universal use of wood. Scarcity of small local brick kilns and scarcity of masons have been a natural accompaniment of the abundance of sawmill products. Substantially built farmhouses of brick are quite common in parts of Ohio and Indiana, and they will be found here and there in Illinois, Michigan, and Wisconsin within fifty miles of brick-making centers. Some of the most interesting examples of brick farm buildings are to be found in New England, where the English colonists brought from across the

SECOND FLOOR, LAKESIDE FARMHOUSE.



A FIELDSTONE FARMHOUSE.

sea their predilection for substantial and enduring building materials. In order to build according to the ways of their forefathers, they took a great deal of trouble to secure bricks, either by importation, or by burning their own bricks where stone was not available or suitable for the purpose. The accompanying sketch of the old "Garrison House" or "SpencerHouse" at old Newbury, Mass., supposed to have been built prior to 1640, and the "Lee Farm" on the Kennebec River, below Bath, Me., represent two interesting examples, both of which are standing today as proofs of the durability of burnt clay laid in very ordinary mortar. The bricks in the "porch" (so-called) of the former are carefully molded by hand, and it is quite probable that they were imported. The walls of the "Lee Farm," now more than one hundred years old, are over two feet thick, and the bricks, to judge from their softness, were burned near by long before there were any regular kilns in the Pine Tree State.



PLANS, A FIELDSTONE FARMHOUSE.

Altogether, the farmhouse problem in this country is a most interesting one; and as the cheap and temporary houses of the first settlers and their immediate descendants fall into dilapidation and decay, it is to be hoped that we shall enter on an era of more substantial, livable, and attractive homes for the millions who till the soil and form the backbone of the nation.

"The Brickbuilder" Competition. III.

A FARMHOUSE.

CRITICISM AND AWARD BY R. CLIPSTON STURGIS.

THE drawings submitted in this competition seemed to me of unusual excellence, and a large number show thought and study. It was sufficiently difficult to select a half dozen to place above the rest, and it was still more difficult to rank these. In considering the problem, there were three main points: first, the general layout,— the arrangement of the buildings on the land, their relation to each other, for convenience and for aspect, both very important in a farm, and their grouping as an architectural composition; second, the plans in detail,— the arrangement of the rooms in the house, to give to the farmer some measure of retirement, with pleasant exposure and outlook, and yet give him easy supervision of his farm buildings, and the arrangement of the barn to make the care of the stock easy, and to give them good quarters, and to provide accommodation for the necessary implements and for the farm produce; third, the exterior treatment, which should be simple and farm-like in character, and yet substantial and pleasing.

"Countryman" was awarded the first place, because on the three counts he appeared to have done most toward solving the various problems, but there is certainly a very narrow margin between his design and the two placed second and third.

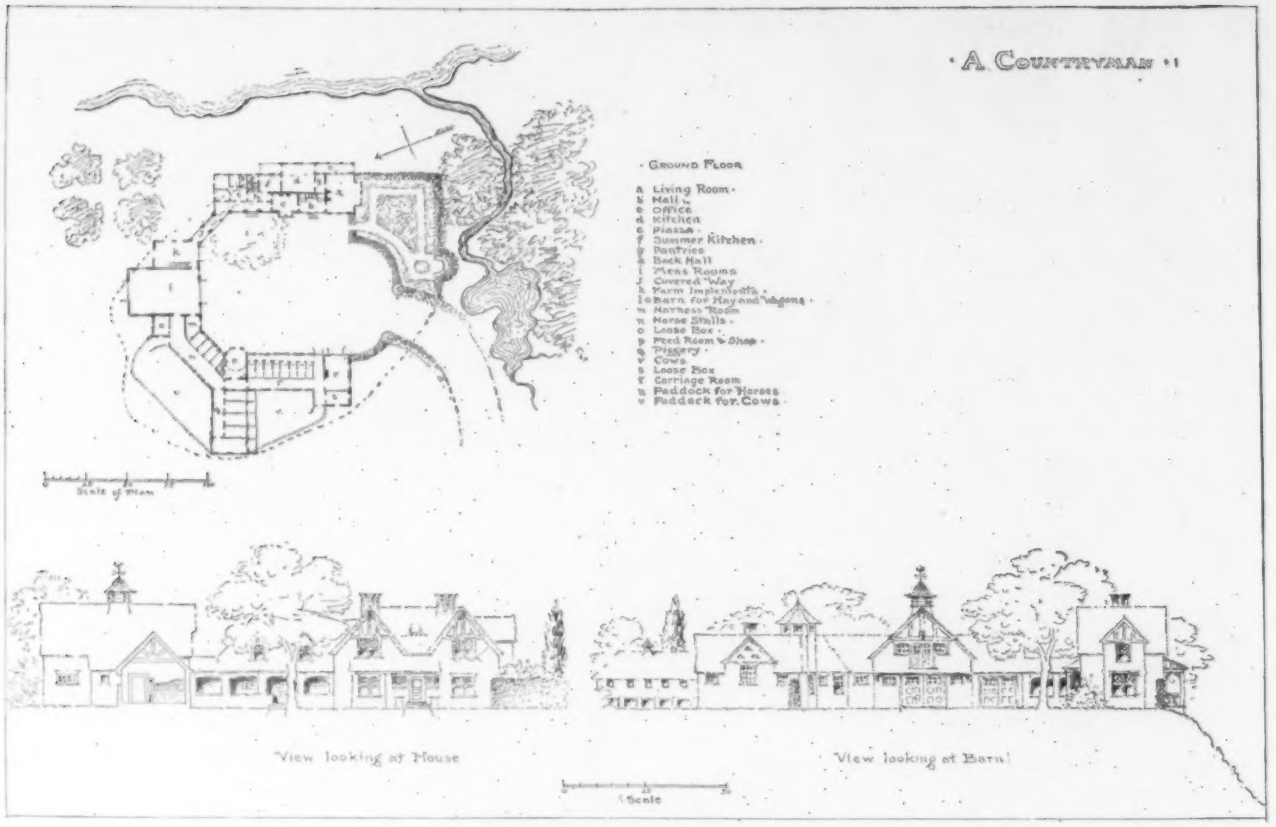
At first sight "Countryman's" weak rendering prejudices one against him; but if one studies the design carefully he is forced to admit that his general arrangement of the buildings could hardly be improved upon. It is unquestionably a farm. The great farmyard is the central feature, and the buildings are grouped about it so as to give the house the best position for view and aspect, and yet leave it in command of the barn; and the barn stretches out to face south and southeast. The garden occupies the right place, not too important, but easy of access and away from the more every-day side of the establishment. If "Countryman" had merely extended his hedge to enclose a small front door yard, it would have seemed a quite perfect arrangement. Then the house is well planned, all the rooms are pleasant and sunny, and the men's rooms occupy the right place at the north end toward the barn. The summer kitchen is the only doubtful room; a cooler position with more cross ventilation would have been preferable. The barn is excellently planned, horses, cows, and pigs grouped round a working center, with adjacent paddocks. One would have liked the carriage room a little nearer the horses, and the paddocks are hardly sunny enough for winter, which is the time they would be most used. The exterior is the weakest point of the whole design, but even this is largely due to the feeble drawing. If well executed on these very lines it would be a pleasing group, and the only doubt is whether the designer knew how good his design might be.

"In Haste" is placed second. His general plan is not quite as good as the first. It is a little more like an accidental grouping than a studied arrangement, but it has all the charm which such a plan often has. There is, perhaps, a little too much of elegance in the forecourt treatment of the ground between house and barn, emphasizing unduly the unbusinesslike side of the place. The house plan is first-rate, convenient, comfortable, homelike, and the barn is fairly well arranged; but here again the real farm is a bit in the background, with scant space, rather out of the way, allotted to the wagons and implements. The paddocks seem somewhat confused with sheds. The exterior is wholly charming and suitable; quite the best of the lot.

Third place is given to "Seigniory." His general plan is quite different from either of the others. The buildings are not grouped around a center, but are rather two groups merely touching at one point. It is a perfectly logical and defensible scheme well carried out. It gives importance to the house, and yet places it where it is in easy communication with the barn. The approach to the house is very simple, and yet has a certain dignity, and the extension of the road straight across the front of the barn makes an excellent thoroughfare. The house is extremely well planned. The rooms are good, well placed, and in proper sequence; and the back porch, opening two ways, and the sheds and ice house show thought. The barn would be very good but for its exposure. The main face is southeast, and the central building, which is high, would cut off all sun in winter from the cow stable and cow yard. The reversal of stable yard and cow yard would have obviated this, but the pigs would then have been too close to the house. Approaching the main floor of the hay barn up an incline is always a good plan if grades suggest it, but as indicated here, it would mean a long run to give a grade sufficiently easy for hauling up heavy loads. The exterior is distinctly the weak point of this design, and the rendering is not sufficiently definite to explain the author's intention. It suggests a brick or stone house cemented rather than an exposed brick wall, and one questions whether the gables are coped with stone or with brick, and whether the coping is flat or pitched. A few more strokes of the pen would have made this clear. It is well to save unnecessary labor, but unwise to omit anything which is essential.

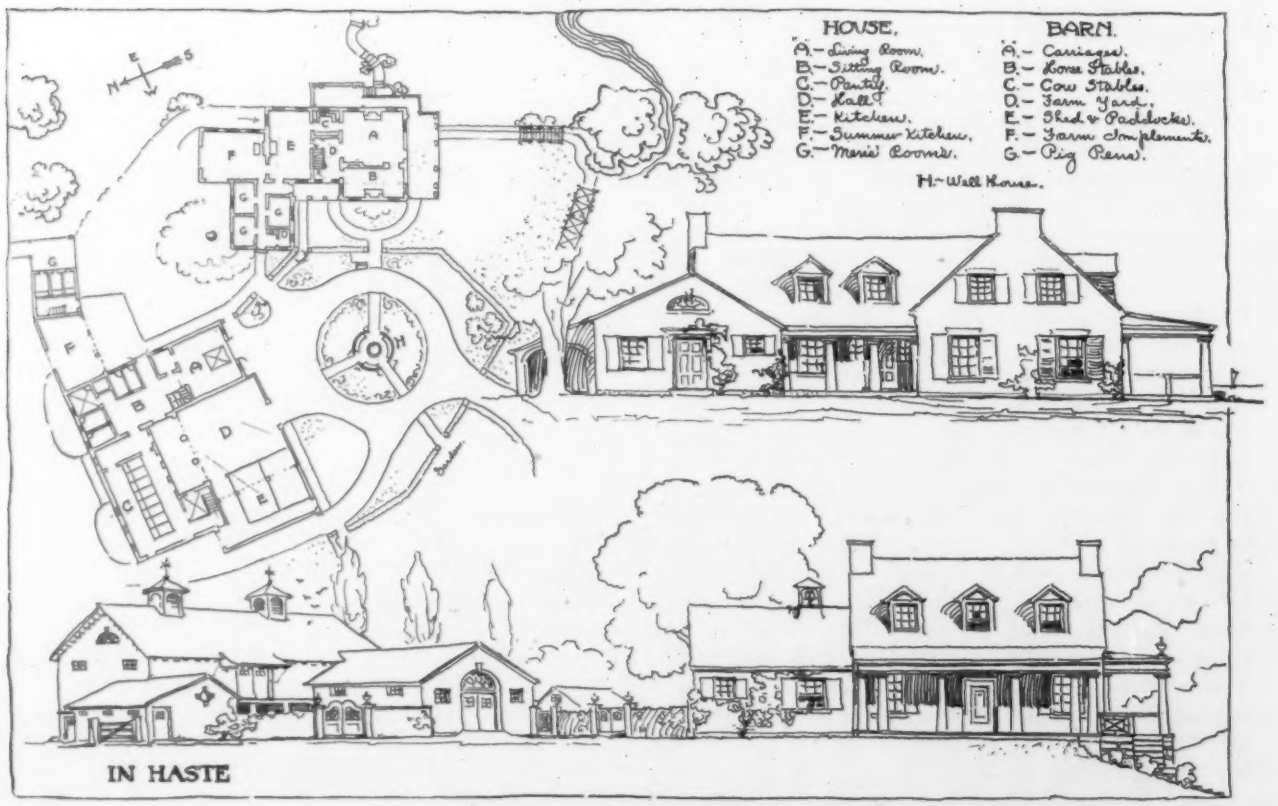
"Reuben" receives first mention largely because of his very good exterior, charmingly rendered. It is not, however, a solution of the problem. It is not a farmer's house and barn, but the house of a man of country tastes, who, besides his horses and carriages, keeps some cows and pigs. The "barn" is really a stable with a cow barn attached. There is no great space for storing crops, nor for the wagons and implements necessary to farm work. The garden, placed between house and barn, adds further to this impression. The man who owned this charming place would not have the farm hands sleep in his house.

The second mention is given to "Eli," a good sensible design; house and barn well placed and both fairly well planned, an exterior which is sound commonsense sort of work and which would look well in execution.



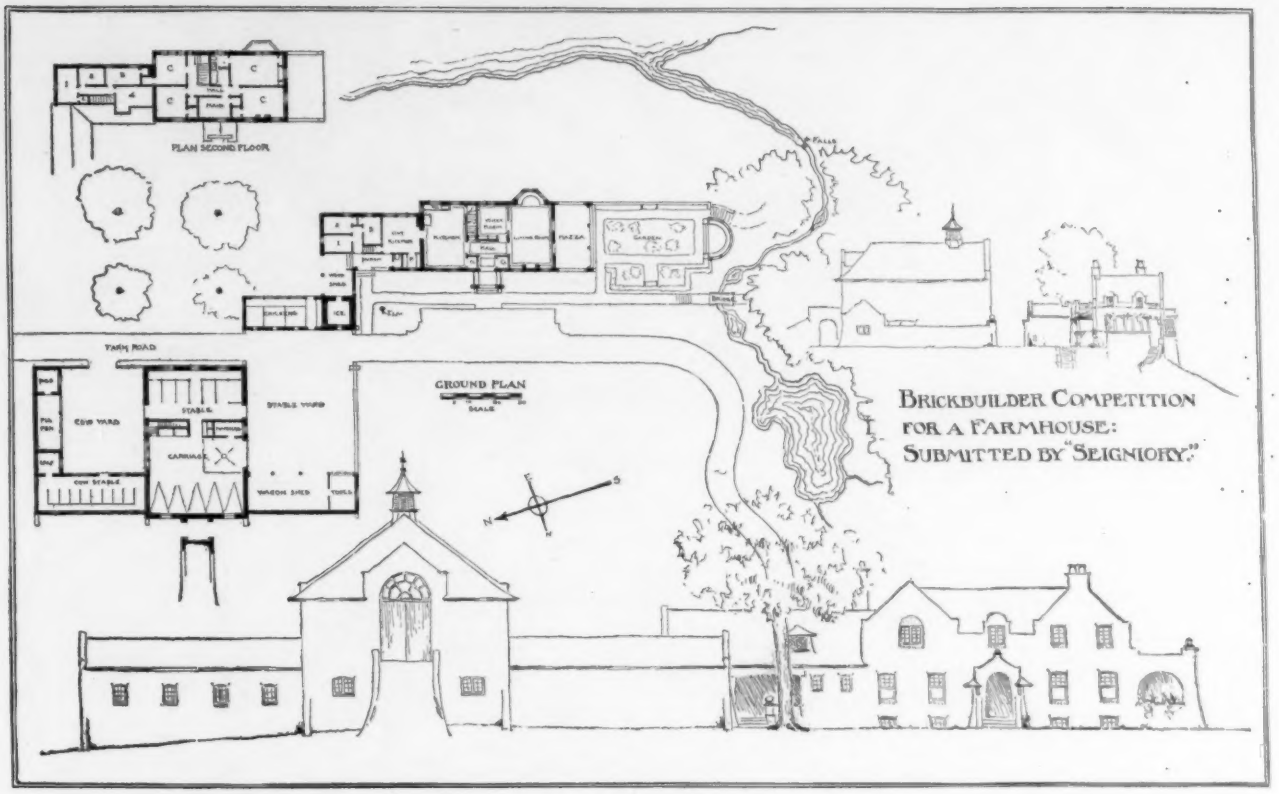
FIRST PRIZE DESIGN.

WILFRED A. NORRIS, CAMBRIDGE, MASS.



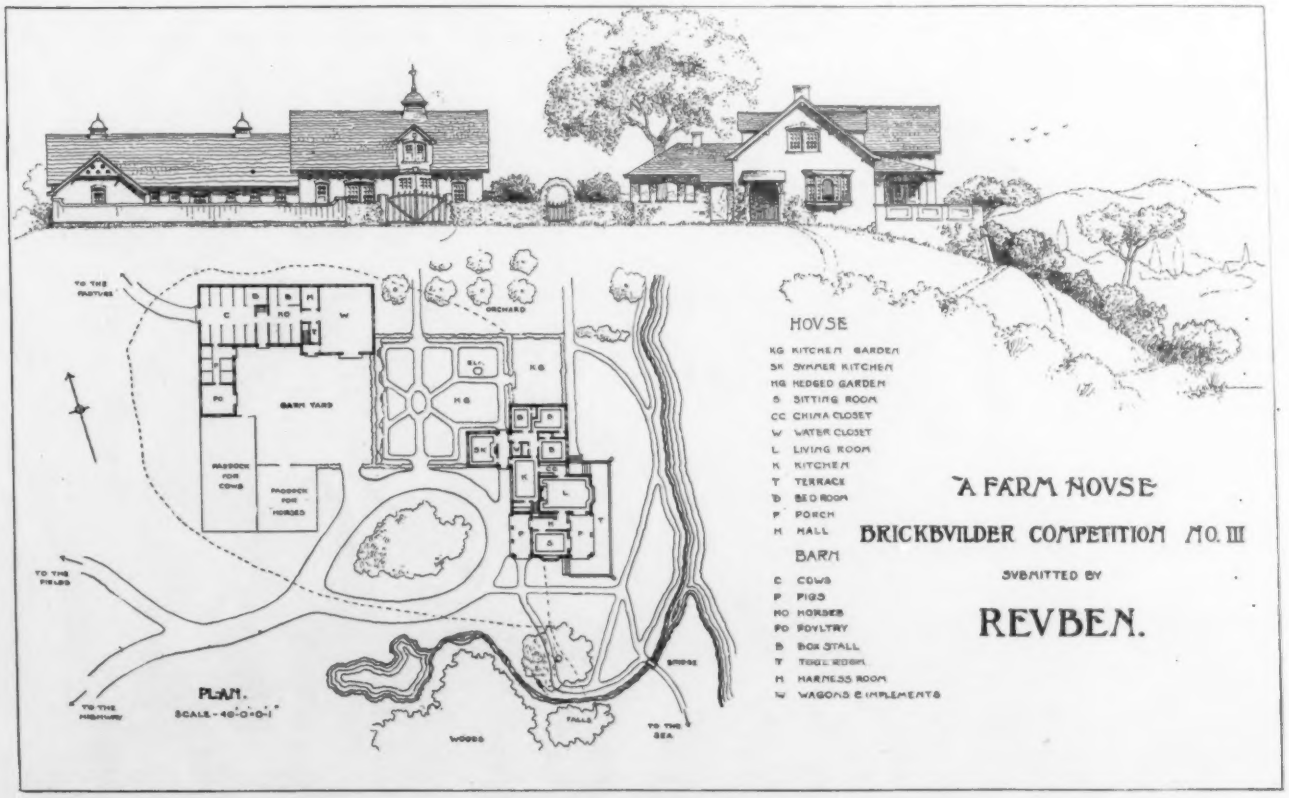
SECOND PRIZE DESIGN.

WILLIAM L. PHILLIPS, ROCHESTER, N. Y.



THIRD PRIZE DESIGN.

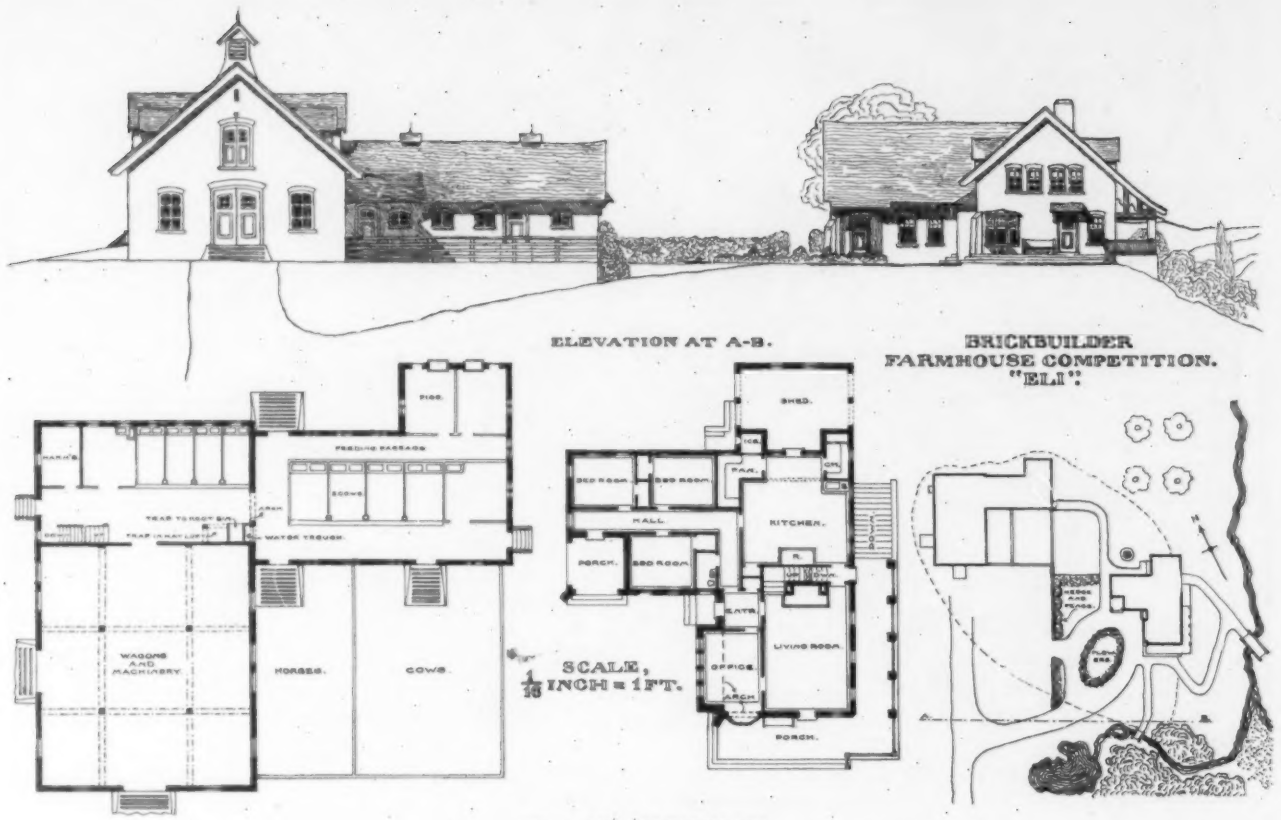
HENRY LOOMIS CURTIS, PHILADELPHIA, PA.



FIRST MENTION.

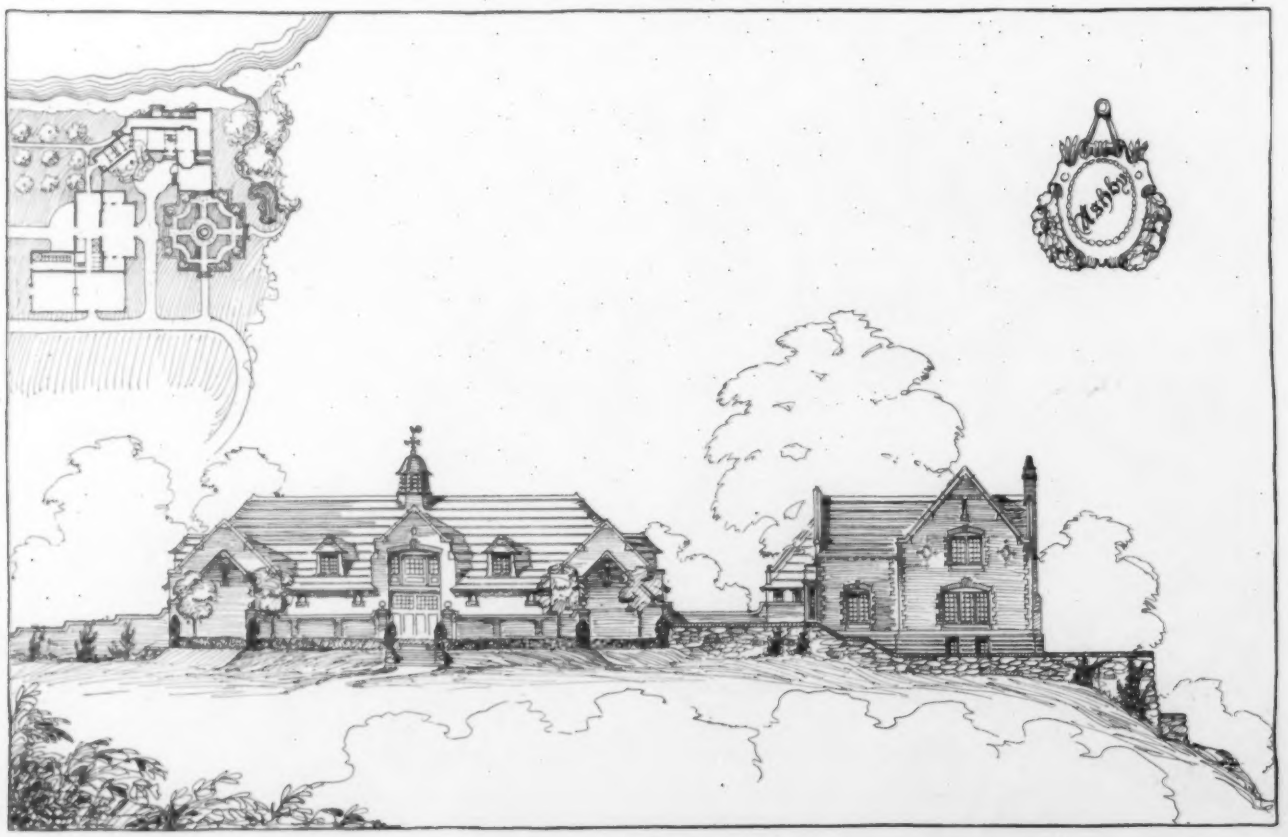
GEORGE P. KIEFER, MILWAUKEE, WIS.

UNIV OF ILL.

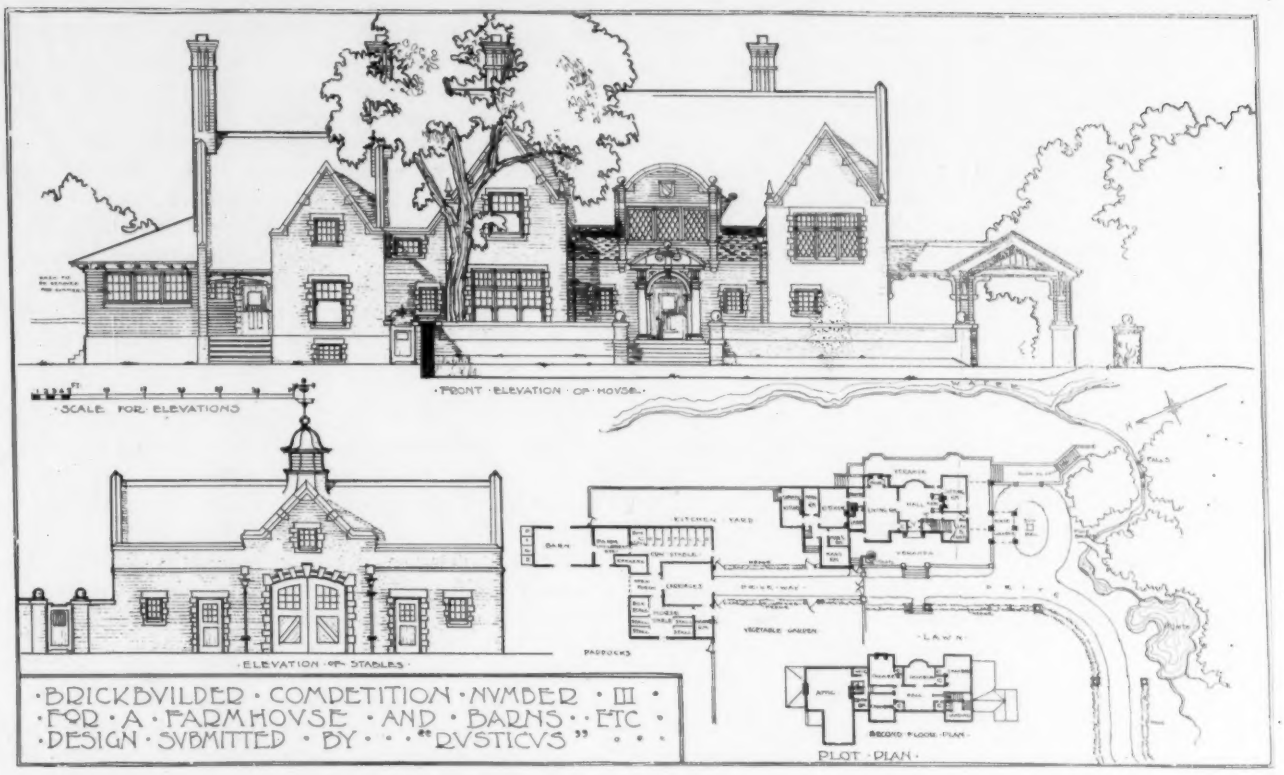


SECOND MENTION.

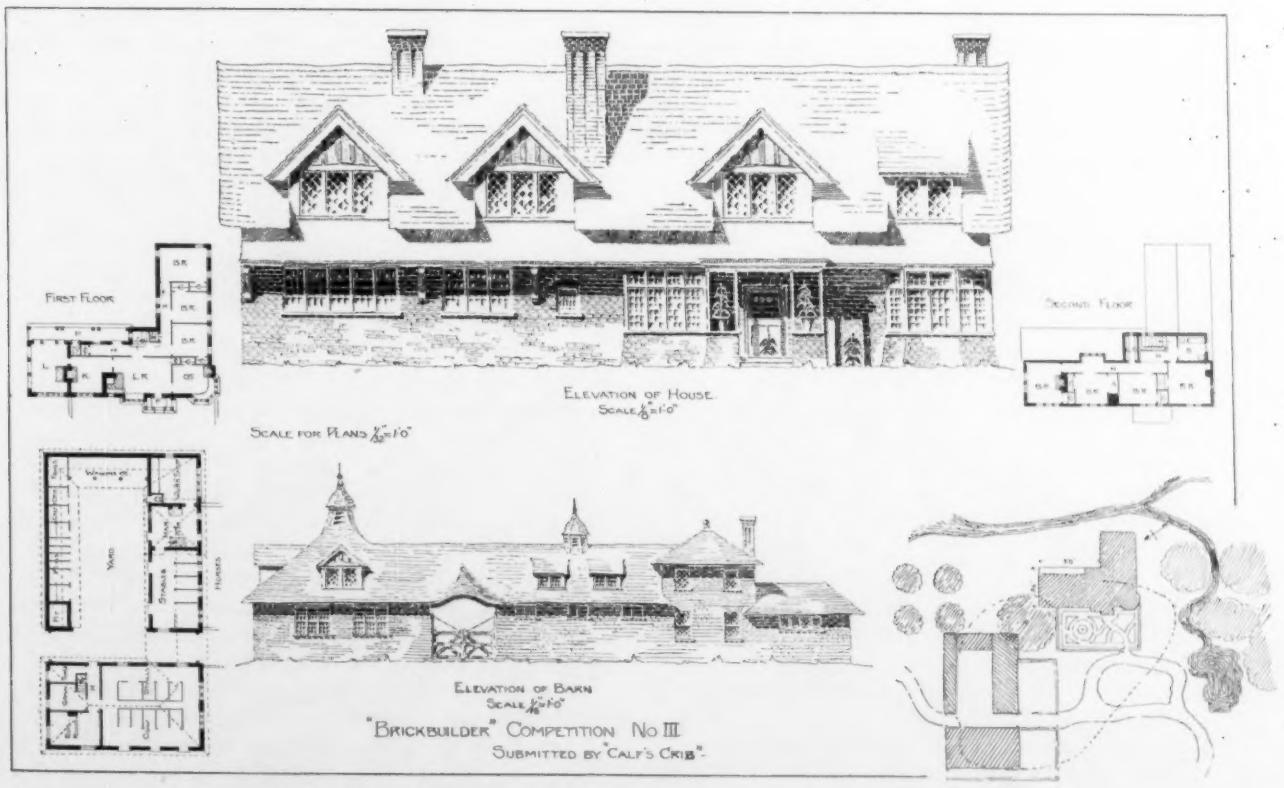
Walter W. Bonns, Milwaukee, Wis.



DESIGN SUBMITTED BY CHARLES W. KILLAM, BOSTON, MASS.



DESIGN SUBMITTED BY J. MELVILLE MILLER, BOSTON, MASS.



DESIGN SUBMITTED BY W. W. DE VEAUX, NEW YORK, N. Y.

UNIV. OF MICH.

Fire-proofing.

PRACTICAL FIRE TESTS.

THE numerous tests that have been conducted by the British Fire Prevention Committee since its inception in 1897, after the great Cripplegate fire, supply much valuable information on the relative fire-resisting qualities of various materials used in building work, and, as the committee have no mercenary motives, the results obtained by them may be regarded as being perfectly accurate and trustworthy. The committee's testing station is at the side of Regent's Canal, London, and their tests are conducted in brick huts 10 ft. square inside, which are supplied with gas through large mains. The temperatures are recorded by means of two Roberts-Austen pyrometers, connected with the huts by wires.

In these articles it is proposed to deal with the fire tests that have been made with different kinds of ceilings, columns, doors, fire curtains, floors, glazing, partitions, protective coverings, and non-inflammable wood.

Ceilings. — Architects and builders have constantly before them the problem of protecting ordinary residential property against that rapid spread of fire common to buildings where the ordinary partition and the ordinary floor are chiefly used. As the substitution of a solid floor or partition would be too costly, attempts are made to find something which will supersede the usual lath and plaster covering used for ceilings and will check the fire sufficiently to give the inmates a chance of escape. As yet only two ceilings have been tested by the committee, — one made by the Asbestos and Asbestic Company, Ltd., of London, and the other by Messrs. D. Anderson & Son, Ltd., and J. C. Broadbent & Co., Ltd., of London. The first ceiling was constructed with 2 by 8 in. spruce joists, spaced at 15-in. centers, with two rows of solid 2 by 8 in. bridging; the flooring was of 1-in. boards. Laths of St. Petersburg fir, rent or split, were used, and were spaced ⅜ in. apart. The plaster consisted of 350 pounds of Danville asbestic plaster to 2 bushels of Stamford graystone lime slaked in 50 gallons of water; a layer 1⅛ in. thick was put on, and the plaster was brought down the walls about 6 ins., forming a cove. The area of the ceiling was 100 ft. in the clear. Three weeks (spring) were allowed for construction and drying. The object of the test was to record the effect of a smoldering fire of fifteen minutes' duration at a temperature not exceeding 500 degs. Fahr., followed by a fire of half an hour, gradually increasing from 500 degs. Fahr. to 1,500 degs. Fahr., followed suddenly by the application of water for three minutes. The following is a summary of the effect: No perceptible difference in the ceiling was observed during the progress of the test. The application of water caused no injury to the ceiling. No portion of it fell down, either during or after the test. When examined, after the test, cracks had developed over the surface of the ceiling, many about $\frac{1}{16}$ in. wide. Some of the wood laths were charred, but none had ignited.

The second ceiling tested consisted of 3 by 9 in. deal joists, spaced at 19-in. centers, and resting 4½ ins. on the walls at each end. A slag-wool slab 1 in. thick and 5 ins. wide was screwed at the end of each joist on both sides. The flooring was of ⅞ in. boards, and the ceiling was formed of slag-wool slabs 1¾ ins. thick (reduced to 1½ ins. thick when pressed into position, as the slabs consisted of slag-wool enclosed between galvanized wire netting). Round the walls of the hut a wood molding was fixed, forming a cornice and covering the slag-wool which projected below the ⅞ in. match-boarding ceiling. The fire lasted an hour, the temperature gradually increasing to 1,800 degs. Fahr., followed by the immediate application of water for two minutes. When examined after the test, the joists and flooring were sound and not damaged by fire.

Columns. — Though certain fire tests had been made at Hamburg and New York, there had only been one attempt at really systematic and independent testing, namely, at Brooklyn, U. S. A.; and the committee thought proper in October, 1898, to publish the results of the Brooklyn tests with unprotected columns. One test was made with a Carnegie steel-box channel column about 14 ft. high by 12 by 10 ins.; the plates were ¼ in. thick. The temperature was raised rapidly, and the column showed signs of failing when it became "red," there being then a pressure on it of 48.06 tons. Strength by Gordon's formula: Breaking strength per square inch, 45,630 lbs.; area of cross-section, 15 sq. ins.; breaking load, 15×45,630, 684,450 lbs. (342 tons). Actual greatest load, cold, 141.4 tons, with no change of form. Another test was made with a hollow cast-iron column of 8-in. external diameter, 1-in. metal, and about 13 ft. high. This column also began to fail when it became "red," the pressure being then 84.8 tons. The strength by Gordon's formula was as follows: Breaking strength, 902,000 lbs.; safe load, $\frac{1}{5}$×902,000, 180,400 lbs. (90.2 tons). In a test with another cast-iron column a jet of water from a ¾ in. nozzle was thrown on it several times after heating it. The last time the heat was raised to 1,300 deg., Fahr., the iron being then a "bright red" color. The column was beginning to yield by bending just before the last application of water; but it was apparently unaffected by the water.

Doors. — A number of fire tests with doors have been made by the committee, two doors of different woods being generally tested together. The first test was with a solid-framed door of 2-in. teak. The door was 6 ft. by 2 ft. 5 ins., and was hung in a 4 by 3 in. rebated teak frame to open outwards; the test lasted one hour, the temperature gradually increasing to 2,000 deg. Fahr. After twenty-four minutes flame showed between the bottom edge of the door and the sill, and at the end of the hour flame burst through all joints, the door collapsing five minutes afterwards. On another occasion a 1⅜ in. four-paneled pine door and a 1⅞ in. four-paneled pine door were tested together, the former being 6 ft. 6 ins. by 2 ft. 7 ins., and the latter 6 ft. 6 ins. by 2 ft. 4 ins.; both were hung in 4 by 3 in. rebated frames to open outwards. The fire broke through the 1⅜ in. door in nineteen minutes, at a temperature of about

1,400 deg. Fahr., and this door was destroyed in twenty-two minutes. The fire broke through the 1⅞ in. door in twenty minutes, at a temperature of about 1,600 deg. Fahr., and the door collapsed in twenty-six minutes. From the foregoing test it may be taken that the life of ordinary pine doors in a fire created, say, in a room where the windows have been broken and a draught created is about twenty minutes, and the additional ½ in. in the thickness of the material does not seem to make much difference. It will be noted that the teak door stood an hour under more severe conditions.

A most interesting test made by the committee in June of last year was with a 2-in. wood door covered with tinned steel plates (26 S. W. G.) and an iron door with a frame ⅜ in. thick and panels ¼ in. thick. The door openings were 3 ft. 9 ins. by 7 ft. 3 ins., and the doors were hung to open inwards (towards the fire, which lasted one hour and reached 2,000 deg. Fahr.). The following is a summary of the effect: The armored door remained in position, though it was much buckled and bulged, and the upper part gradually inclined inwards considerably, permitting the passage of flame. The first spurt of flame over the top of the door was seen after five minutes. The iron door remained in position throughout the test, but became red hot, buckled and warped considerably, together with its rebated frame. The first spurt of flame between door and frame was seen after twenty minutes. It should be mentioned that whilst the iron door was hung in a rebated frame, the armored door fitted closely against the face of the brick wall and had a 3-in. overlap at the sides and top.

Oak and teak doors were next tested together. Each was 2 ins. thick with solid panels, and the door opening was 3 ft. 3 ins. by 6 ft. 9 ins. The fire was a fierce one and lasted an hour. In five minutes flame appeared between the frame and top rail of the teak door, and in fifty-five minutes it had extended to the bottom of the upper panels, flame also coming through the joints between the muntin and lower panels. In fifty-eight minutes the door collapsed and fell inwards. The oak door stood the test better, for it was thirty minutes before flame got through between the frame and top rail. In forty-four minutes the fire came through the lock rail; in fifty-five minutes the four panels fell outwards, and in fifty-nine minutes the remainder of the door fell. As both are used so extensively, it is important to know whether a door of pitch-pine will resist a fire for a longer time than one of deal. The doors tested by the committee were 2 ins. thick, framed, had solid panels, and opened inwards on the fire side. It was found that one withstood the fire almost as well as the other, though the pitch-pine door was slightly the better. It was twenty minutes before flame appeared over the top rail of this door, whereas three minutes before the flame had come through this part of the deal door. When fifty minutes had expired the upper panels and muntin of the pine door fell out, and fire was seen through a lower panel of the deal door; both doors collapsed entirely after fifty-seven minutes.

A Honduras mahogany door and a poplar door, both 2 ins. thick, framed, with solid panels, were next tested. This proved the former to be much more fire-resisting than the latter. In five minutes flame came through the joint between the head and frame of the poplar door; in ten minutes the door was badly twisted; in twenty-four minutes the top west panel fell in; and in thirty-six minutes the whole door collapsed. On the other hand, it was twenty-six minutes before the flame became continuous along the top rail of the mahogany door, and this door did not fall till after forty-nine minutes.

An hour's test with a 2-in. framed Austrian oak door and a similar door of American walnut showed that the oak was the better. The first spurt of flame appeared through the walnut door in fifteen minutes; but this did not take place till after thirty-three minutes on the oak door. In forty-two minutes flame came through the joint between the top muntin and upper east panel of the walnut door; in forty-five minutes the lower west panel of the oak door fell out; in fifty-five minutes this door collapsed; and three minutes later the walnut door collapsed.

So much has been said about the advantages of doors constructed in three thicknesses of boarding that the committee has decided to conduct a series of tests with such doors in order that they may collect some authentic data regarding their resistance to fire. The first test of the series was with a 2⅝ in. archangel deal door and a similar door of Quebec pine, both constructed in three thicknesses and hung to open inwards on to the fire side. In thirty-nine minutes flame appeared intermittingly over the top of the deal door, and in sixty-five minutes the upper part of this door was considerably burnt, and flame was seen through several small holes in its lower portion. The pine door stood better, for sixty minutes elapsed before flame appeared over the top of it; ten minutes later, after water had been applied, the two inner thicknesses were found to be practically burnt away, and the outer thickness (which was for the most part in position) was much damaged.

The following table summarizes the particulars given of these tests with doors: —

Material of Door.	Temperature in deg. Fahr.	First appearance of flame.	Result.
Teak, 2 in., solid framed	2,000	24 min.	Door collapsed after 65 minutes.
Pine, 1⅜ in., four paneled	1,400	19 min.	Door destroyed in 22 minutes.
Pine, 1⅞ in., four paneled	1,600	20 min.	Door destroyed in 26 minutes.
Armored, 2 in.	2,000	5 min.	Door remained in position, but was much buckled.
Iron, ⅜ in. frame, ¼ in. panels	2,000	20 min.	Door remained in position, but was much buckled.
Pitch Pine, 2 in., solid panels	2,000	20 min.	Door collapsed after 57 minutes.
Deal, 2 in., solid panels	2,000	17 min.	,, ,, ,, 57 minutes.
Honduras Mahogany, 2 in., solid panels	2,000	15 min.	,, ,, ,, 49 minutes.
Poplar, 2 in., solid panels	2,000	5 min.	,, ,, ,, 36 minutes.
Austrian Oak, 2 in., solid panels	2,000	33 min.	,, ,, ,, 55 minutes.
American Walnut, 2 in., solid panels	2,000	15 min.	,, ,, ,, 58 minutes.
Archangel Deal, 2⅝ in., three thicknesses	2,000	39 min.	Upper part considerably burnt after 65 minutes and flame seen through several holes below.
Quebec Pine, 2⅝ in., three thicknesses	2,000	60 min.	After 70 minutes two inner thicknesses burnt away, and outer one badly damaged.

Selected Miscellany.

NOTES FROM NEW YORK.

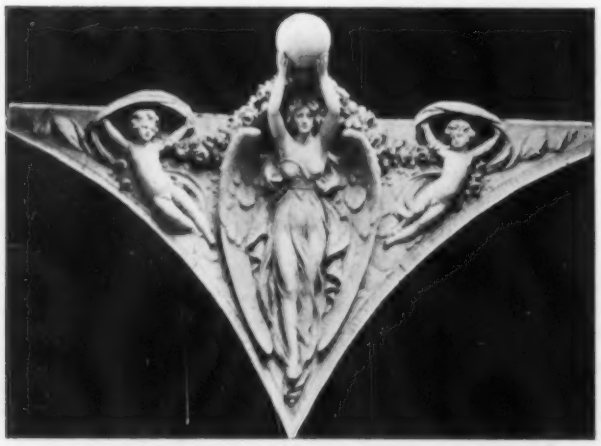
It is not surprising that I am obliged to report that the month just passed has been one of extreme dullness among architects and builders. No one expects to find an architect in his office during August, and if he does, considers himself lucky. Then, too, the man who has invented a new material which will revolutionize building methods and do away with brick, plaster, wood, iron, and concrete deserves a rest, for his lot has been hard and he has not always had a satisfactory two hours' chat with the leading architects whom he has visited; in fact, more often he has simply left his card which the unfeeling architect used for memorandum or "ticking" purposes. Even the festive office boy seems to be subdued and has lost his ambition to make beautiful wash drawings of the orders.

Speaking of the architectural office boy reminds me of an incident which occurred in one of the large offices here. Plans were under way for a large building to be built by the Duchess de B——, and the drawings were all carefully labeled with her full title, *viz.*, Mme. the Duchess de B——, etc. On one of her visits, while she was in the private office with the architect, a certain drawing was wanted and the office boy was sent for it. Upon its arrival the architect expressed a doubt as to its being the one wanted, but the boy spoke up, "Oh, yes, sir, dats de one; don't you see her name on it, Mamie the Duchess?"

It is encouraging to be able to report that work upon the new public library will soon be begun. Bids for the foundation work have been presented to the Park Board, and the names of the successful bidders will be announced within a week.

Work upon the East River bridge, which was progress-

RESIDENCE OF AUSTIN CORBIN, 2D, SPOKANE, WASH.
Cutter & Malengren, Architects.
(Reproduced by courtesy of the Washington Brick, Lime and Manufacturing Company.)

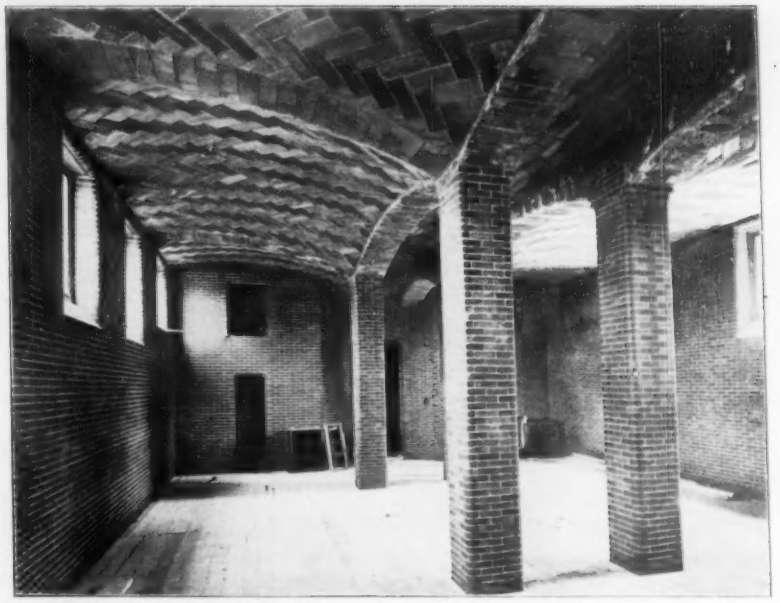


SPANDREL.
Conkling-Armstrong Terra-Cotta Company, makers.
Willis G. Hale, Architect.

MADE FOR THE NEW POST-OFFICE BUILDING AT NEWPORT, KY.
By the Winkle Terra-Cotta Company.

ing so favorably, has been stopped completely for the last three weeks owing to a strike.

While so much has been said of the construction of the high building above ground, comparatively little attention has been given by others than professional men to the vast engineering feats which must be accomplished before the building reaches the grade line, and it is a matter of surprise to the layman that so much time is spent, proportionately, upon the underground work. Upon study it will be found that the difficulties to be overcome are enormous and are never twice alike, and sometimes it takes just as long to put in the foundations for a tall building as to put up the entire superstructure. There are two very interesting examples of skilful foundation work which are now under way, and will amply repay any architect or builder who can spare a little time to study them. They are at the corner of Broad Street and Exchange Place, and at the corner of Wall and William Streets.



FINISHED ROUGH TILE CEILINGS AND FLOORS, MASSACHUSETTS GENERAL HOSPITAL BUILDING, BOSTON.
Work executed by R. Guastavino Company.
Wheelwright & Haven, Architects.

We take pardonable pride in the fact that the only American architects who were awarded gold medals at the Paris Exposition were New Yorkers, *viz.*, McKim, Mead & White and Boring & Tilton.

Bradford L. Gilbert, of this city, has been elected Supervising Architect of the South Carolina Interstate and West Indian Exposition.

UNION TRUST AND SAVINGS BANK BUILDING, CINCINNATI, OHIO.
Built of gray Norman brick, made by the Columbus Brick and Terra-Cotta Company.
D. H. Burnham & Co., Architects.

SOCIETY AND CLUB NEWS.

The second monthly meeting of the Executive Board of the Architectural League of America was held August 7, 1900.

There were present Joseph C. Llewellyn, president; Richard E. Schmidt, vice-president; August C. Wilmanns, treasurer; Emil Lorch, corresponding secretary; Hugh M. G. Garden, recording secretary, and Prof. Newton A. Wells and Robert C. Spencer, Jr., members of the Board.

The chief business transacted was the assignment of the Standing Committees of the League as follows: Publicity and Promotion, the Chicago Architectural Club; Ethics and Competition Code, the Architectural League of New York; Exhibition Circuit, the Cleveland Architectural Club; Foreign Exhibit, the T Square Club, Philadelphia; Current Club Work, the St. Louis Architectural Club.

The Committee on Education will be appointed at a later date. The monthly meeting of the Executive Board is held the first Tuesday of each month at 5 o'clock, at 1218 Association Building, Chicago.

WE are in receipt of the Syllabus of the T Square Club, Philadelphia. The perennial enthusiasm which has placed this organization in the foremost ranks of our American architectural bodies is evidenced in every page of this most carefully prepared recital of what the T Square Club proposes to do. We confess to a feeling of wonder that a professional society of this sort can keep up the interest and so successfully bring into line the possibilities of its own members in the various functions which it undertakes. Most of our older architects will remember the day when the profession was limited in number, restricted in possibilities, and was

HOLYOKE DAM, HOLYOKE, MASS.

largely composed of men of mediocre talent, who were so afraid of each other and so fearful lest some one else would steal their ideas that anything like cooperation or *esprit de corps* was simply out of the question. It must be conceded that the work of bringing architects into harmony with each other and developing the solidarity of interests which so conduce to mutual growth is due, more than to any other one cause, to the work that has been accomplished by the architectural clubs which have sprung up so quickly since the move was first made less than twenty years ago. The maxim that it is not good for man to live alone certainly applies with force to the practice of architecture. It is from the mutual helpings, the keen but friendly competition of ideas, and the glowing friction of kindred minds that possibilities of real growth arise. The T Square Club Syllabus gives one an idea of how this cooperation may be brought about, and it ought to serve as a sort of campaign document for all the architectural clubs; for while the work varies in different cities, the objects are essentially the same everywhere. The calendar of competitions is of the widest scope, including ecclesiastical, suburban, commercial, national, rural, civic, and municipal work, with competitions arranged in a most delightfully suggestive manner; and though the announcement for October 24 of a "fall Smoker and Bumper with an evening devoted to the cultivation of the muses" is suggestive of other things than Vetruvius or the École des Beaux Arts, we cannot but feel full sympathy with the introduction of the playful into the serious line of study which the program indicates. It is announced that the success of last year's competitions has assured the continuance of the T Square Club Traveling Scholarship for the year 1901.

HOLYOKE DAM, HOLYOKE, MASS.
Showing construction in which Alpha Portland Cement (James A. Davis & Co., New England Agents) was used.

MISCELLANEOUS ITEMS.

The Fawcett Ventilated Fire-proof Floors are employed in the new government mint at Philadelphia.

The Hartford Faience Company, Hartford, Conn., is adding another new building to its rapidly growing plant.

G. W. Collignon, architect, Birmingham, Ala., has associated himself with W. C. Knighton for the practice of the profession, and would be glad to receive manufacturers' samples and catalogues.

In the Johnson Free Library, now being erected at Hackensack, N. J., Rossiter & Wright, architects, "The Herculean" terra-cotta floor arches, which require no

GROUP BY F. J. OSTERLING, ARCHITECT.
Perth Amboy Terra-Cotta Company, makers.

GROUP FOR THE UNION DEPOT, COLUMBUS, OHIO.
The Northwestern Terra-Cotta Company, makers.

PANEL BY J. E. R. CARPENTER, ARCHITECT.
Excelsior Terra-Cotta Company, makers.

iron beams, are being supplied by Henry Maurer & Sons, New York City.

The National Fire-proofing Company is delivering at the Broad Exchange Building, Broad and Exchange Streets, New York City (which will be one of the largest buildings in the world), eighteen thousand feet of fire-proofing daily.

PANEL BY GEORGE B. POST, ARCHITECT.
Atlantic Terra-Cotta Company, makers.

The Ohio Mining & Manufacturing Company, Shawnee, Ohio, will supply their bricks on the following new contracts: Carnegie Library, Atlanta, Ga.; Masonic Temple, Lima, Ohio; General Electric Building, Minneapolis, Minn.; Hollingsworth & Callahan Building, Youngstown, Ohio; School Building, Glendale, Ohio; School Building, South Evanston, Ill.

E. E. Gorton, a graduate of the Ceramic Department of the Ohio State University, and for the past four years employed as chemist at the factory of the American

TERRA-COTTA PANEL.
New Jersey Terra-Cotta Company, makers.

RESIDENCE AT LOUISVILLE, KY.
Built of mottled white brick, made by the Ohio Mining and Manufacturing Company.
Mason Maury, Architect.

Terra-Cotta & Ceramic Company, has accepted a position as superintendent with the Ohio Mining and Manufacturing Company.

The following are among the orders which have been taken during August by the New York Architectural Terra-Cotta Company: Apartment House for Walter Stabler, East 39th Street, New York City; Yale Club House, West 44th Street, New York City; Bond Building, Washington, D. C.; Factory for The Benj. F. Smith Company, Pawtucket, R. I.; Schools Nos. 131 and 134, Brooklyn, N. Y.; Gurley Building, Troy, N. Y.

The illustration in our August number, entitled "Park Pavilion, Kansas City, Mo., Van Brunt & Howe, architects," should have been entitled "Pergola for the Board of Park Commissioners, Kansas City, Mo., John Van Brunt, architect." Again, the illustration, entitled "Panel for Post Office, Newport, Ky.," was, in fact, a

GARGOYLE BY MORGAN & WALL, ARCHITECTS.
St. Louis Terra-Cotta Company, makers.

panel designed by George D. Mason for the new office building of Berry Brothers at Detroit.

The Union Akron Cement Company, Buffalo, is supplying Akron Star Brand Cement on the following new

KEY FOR WINDOW BY SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS.
American Terra-Cotta and Ceramic Company, makers.

contracts: Addition to United States Sugar Refinery, Waukegan, Ill.; addition to the Illinois Sugar Refinery, Pekin, Ill.; building for the Genesee Stucco Works, Oakfield, N. Y.; Government Building, New York State Building, and Allbright Art Gallery, at the Pan-American Exhibition, Buffalo.

Charles Bacon, Boston agent for Sayre & Fisher Company, is supplying 300,000 brick for the new residence of Mrs. John L. Gardner, Fenway, Boston, W. T. Sears, architect; also brick on the following new contracts: Barristers Hall, Boston, Shepley, Rutan & Coolidge, architects; Gahm Building, Boston, Hartwell, Richardson & Driver, architects; Peabody residence, Fenway, Boston, Peabody & Stearns, architects; schoolhouse, Winchester, Mass., George F. Newton, architect.

The Penn Buff Brick and Tile Company, Newark, N. J., are supplying their "Blue Ridge" enamel brick

UPPER PORTION OF THE NASBY OFFICE BUILDING, TOLEDO, OHIO.

on the following new contracts: Front of Salinger Block, Rochester, N. H., W. B. Smith, architect; stable at Pride's Crossing, Mass., Little & Browne, architects; apartment house, 40th Street and Sixth Avenue, New York City, Charles A. Rich, architect; factory of the Weston Electrical Instrument Company, Waverly, N. J., Thomas Cressy, architect; St. Agnatins College, New York City, Schickel & Ditmars, architects.

WANTED.—A first-class architectural draughtsman, designer, and colorist. Permanent position for the right party. Address, stating salary,

Harry E. Forney,
National Exchange Bank Bldg. Wheeling, W. Va.

MONTHLY SKETCH PROBLEM OF THE ATELIER FITZWILLIAM, AUDITORIUM BUILDING, CHICAGO.

MANAGED DIRECTLY BY F. J. FITZWILLIAM, A PUPIL OF D'ESPOUY, WHO WON THE GRAND PRIX DE ROME IN THE YEAR 1884.

THESE problems are to be worked up as sketches and not as finished drawings, the problem being spontaneous in execution and the detail in the nature of indication rather than that it should be laboriously drawn. One sketch problem is given each month from September to June. The program for the month of October, 1900, is announced below; send your design and $1.00 at any time during the month of October, and on November 1 it will be remailed to you, postage prepaid, with a written detailed analysis critical of its faults and touching upon the merits of the design. In addition to this will be sent whatever prize (if any) its rank deserves.

For the month of October, 1900, there will be twenty-five cash prizes as follows: One first prize of $30.00; two prizes of $15.00 each; three prizes of $10.00 each; four prizes of $5.00 each; five prizes of $3.00 each; ten prizes of $2.00.

PROGRAM FOR OCTOBER. A COUNTRY CHAPEL.

A Protestant congregation in a rural district has decided to demolish the frame building now used by them as a place of worship, the object being to replace it with another structure of about the same size and seating capacity, but of more substantial material and modern design.

The congregation is one appreciative of good architecture and they can afford sound construction, but excessive cost should be avoided in the solution of this problem. The new chapel will stand alone in a clearing in the heart of a grove; being thus placed in total isolation from other buildings, the effect of each separate façade should be considered by the designer. Provision shall be made on the exterior of the chapel for erecting in a suitable manner a bell to announce the hours of service. This feature may be in the form of a tower or otherwise.

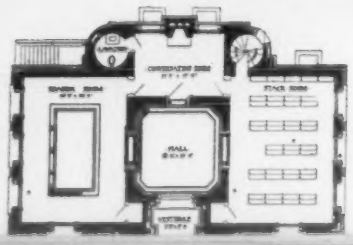
The church membership numbers 200, but seats for 100 additional shall be arranged. This capacity may be with or without a small gallery, bearing in mind that 85 ft. is the limit which the greatest dimension of the plan shall not exceed.

Drawings.—A floor plan, and one perspective showing the front and one side of the chapel, all at the scale of $\frac{3}{32}$ of an inch equals 1 ft. The rendering of the problem is left to the discretion of the designer, but the paper must be cut to the uniform size of 10 by 18 ins.

Send drawings unmounted to The Atelier Fitzwilliam on or before Oct. 31, 1900, and do not deviate from the instructions given above.

←SCRANTON MEMORIAL LIBRARY, MADISON, CONN.

BRITE & BACON, ARCHITECTS.



FRONT

NEW MUSIC HALL, BOSTON, MASS.

McKIM, MEAD & WHITE, ARCHITECTS.

NEW MUSIC HALL, BOSTON, MASS.

McKim, Mead & White, Architects.

UNIV. OF MICH.

APARTMENT HOUSE, ASHMONT, MASS.

EDWIN J. LEWIS, ARCHITECT.

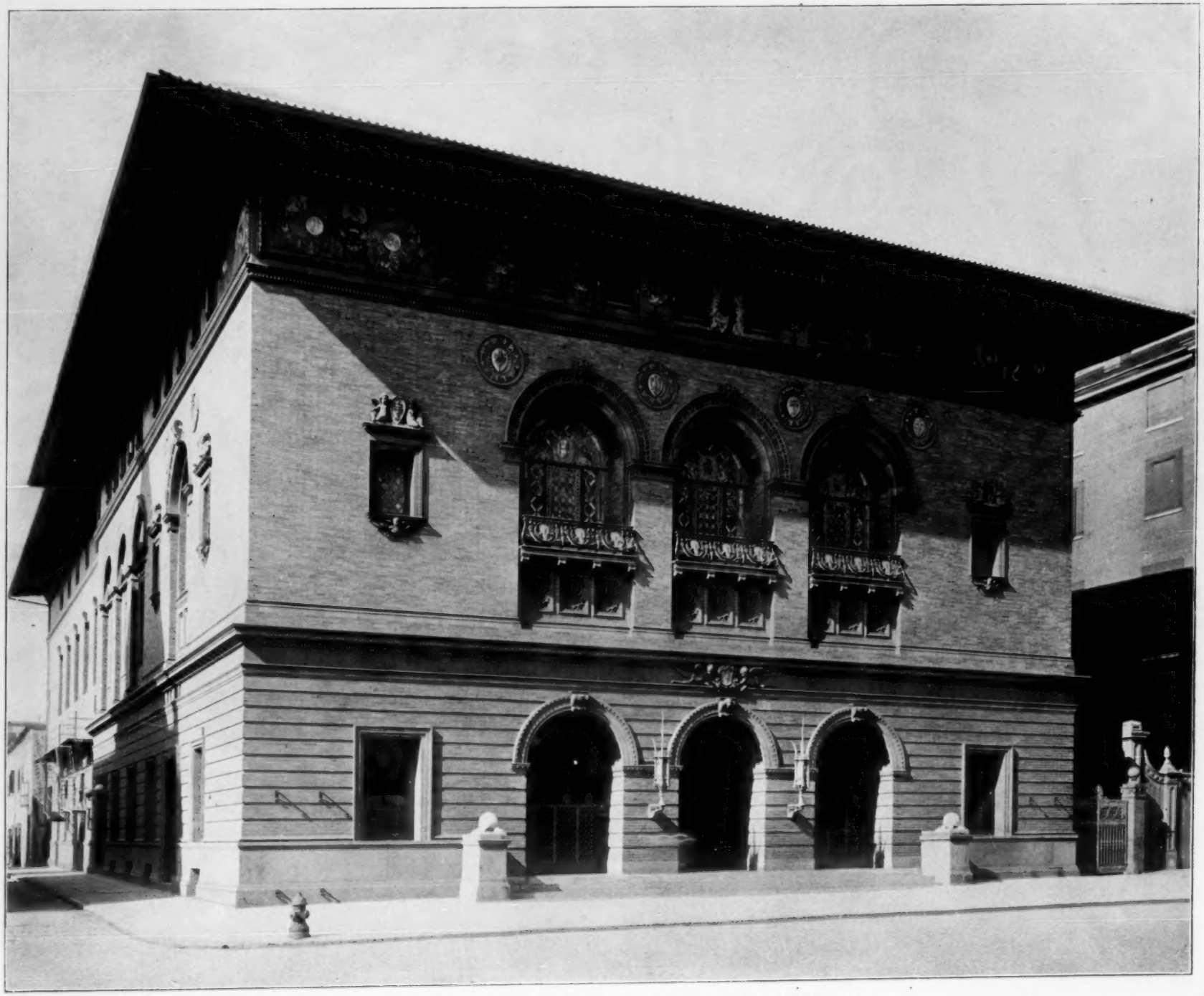
UNIV. OF MICH.

REAR

NEW MUSIC HALL, BOSTON, MASS.

McKIM, MEAD & WHITE, ARCHITECTS.

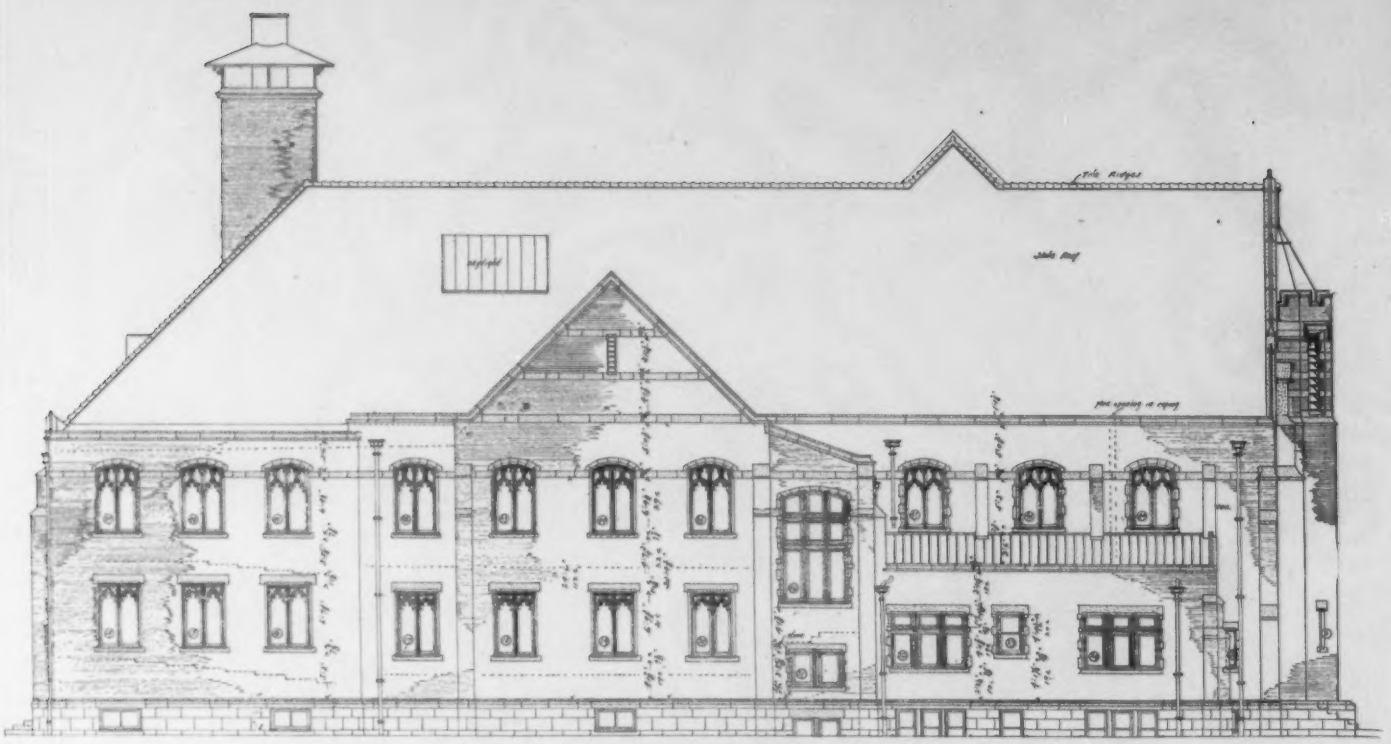
UNIV. OF MICH.



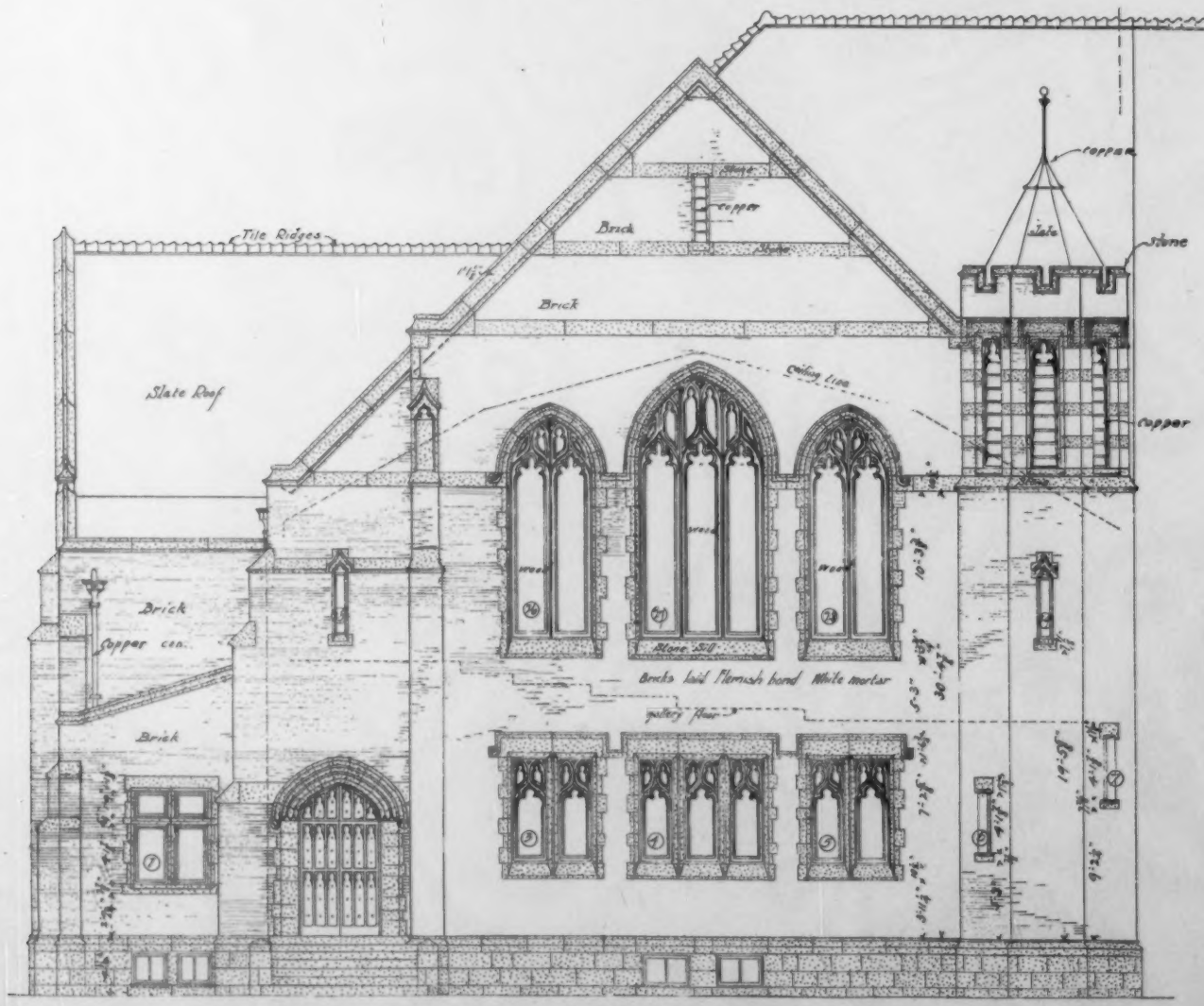
HORTICULTURAL HALL, BROAD STREET, PHILADELPHIA, PA.

FRANK MILES DAY & BRO., ARCHITECTS.

UNIV. OF MICH.



SIDE ELEVATION.



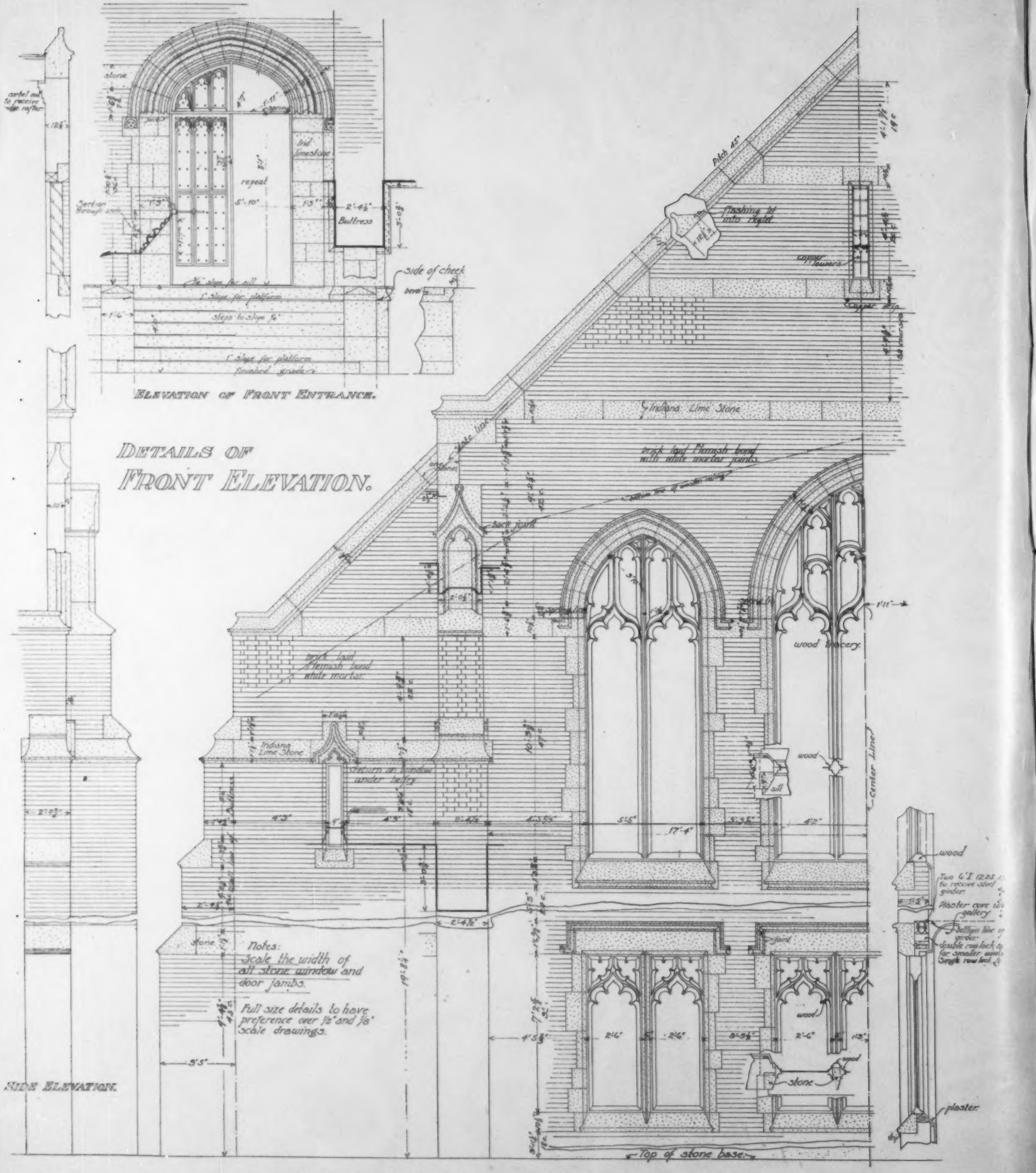
FRONT ELEVATION.

SUNDAY-SCHOOL BUILDING, FIRST BAPTIST CHURCH, FRANKLIN, PA.

BEEZER BROTHERS, ARCHITECTS.

ELEVATION OF FRONT ENTRANCE.

DETAILS OF FRONT ELEVATION.



DETAILS, SUNDAY-SCHOOL BUILDING, FIRST BAPTIST CHURCH, FRANKLIN, PA.

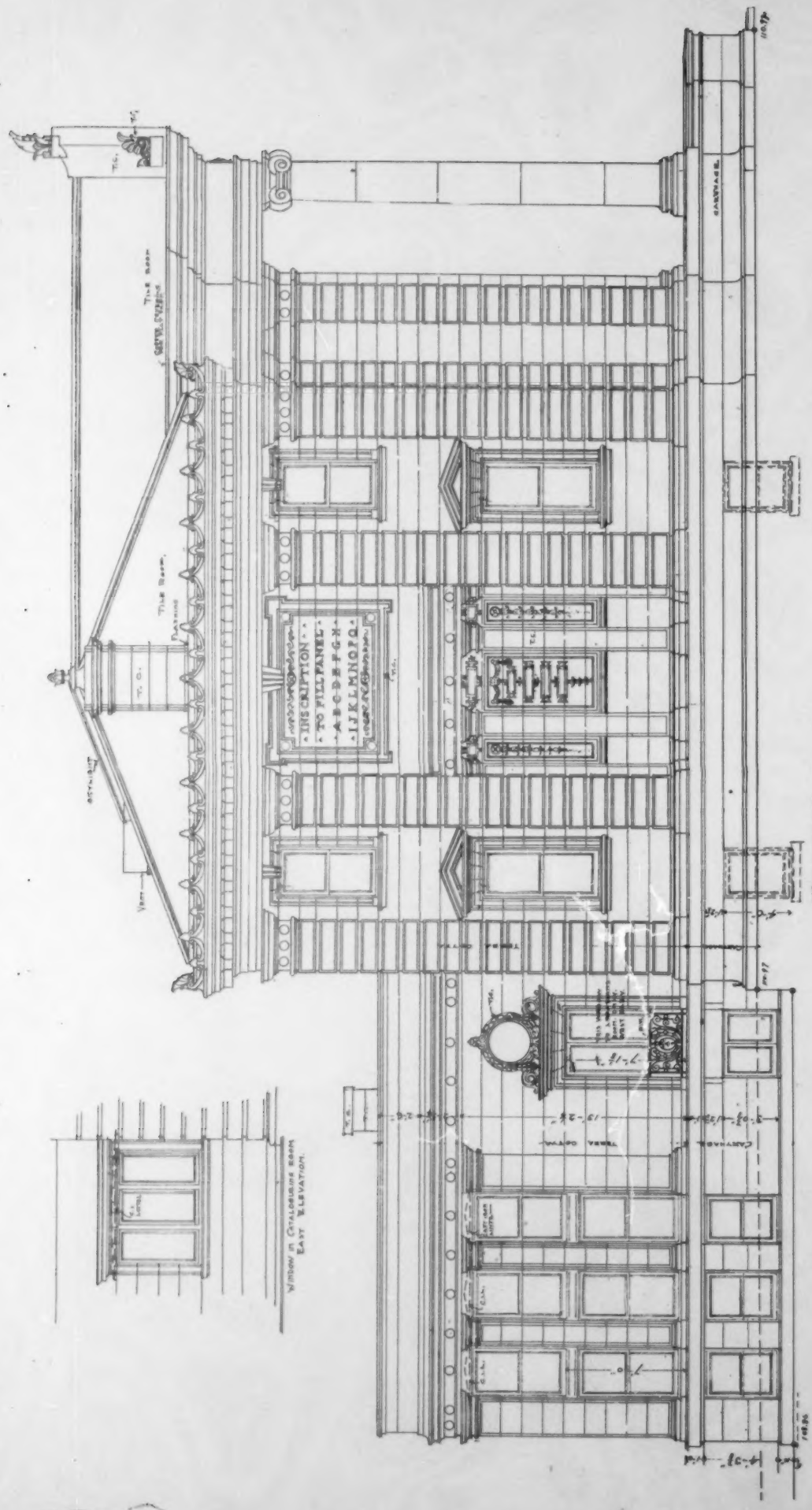
BEEZER BROTHERS, ARCHITECTS.

UNIV. OF MICH.

DETAIL, FRONT ELEVATION.
FIRE ENGINE HOUSE, BOSTON, MASS.
JOHN A. FOX, ARCHITECT.

UNIV. OF MICH.

PER



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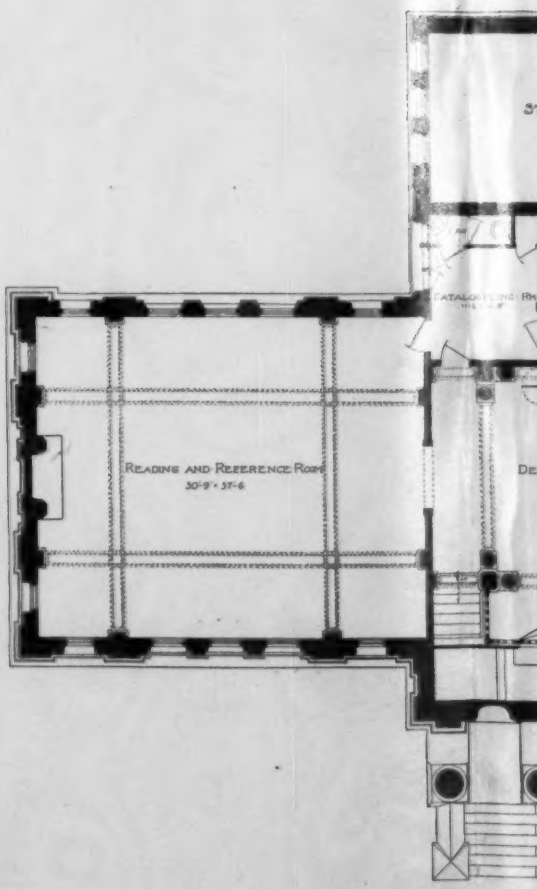
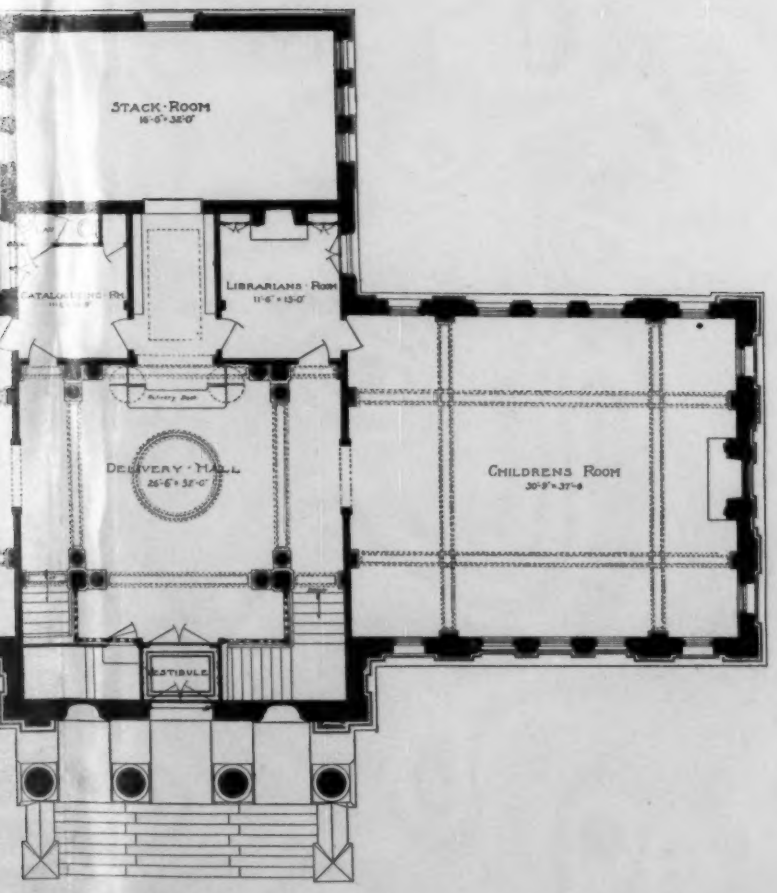
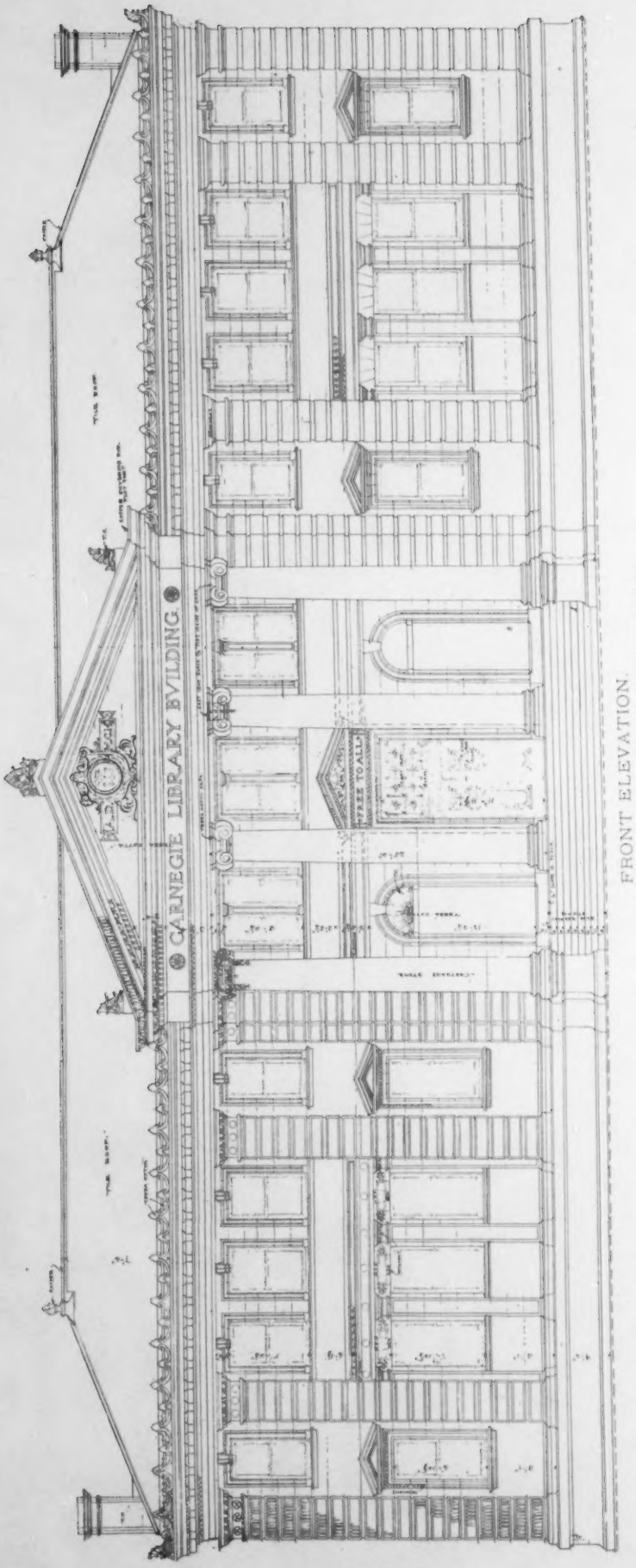


UNIV OF MICH

PERSPECTIVE.



PLAN.

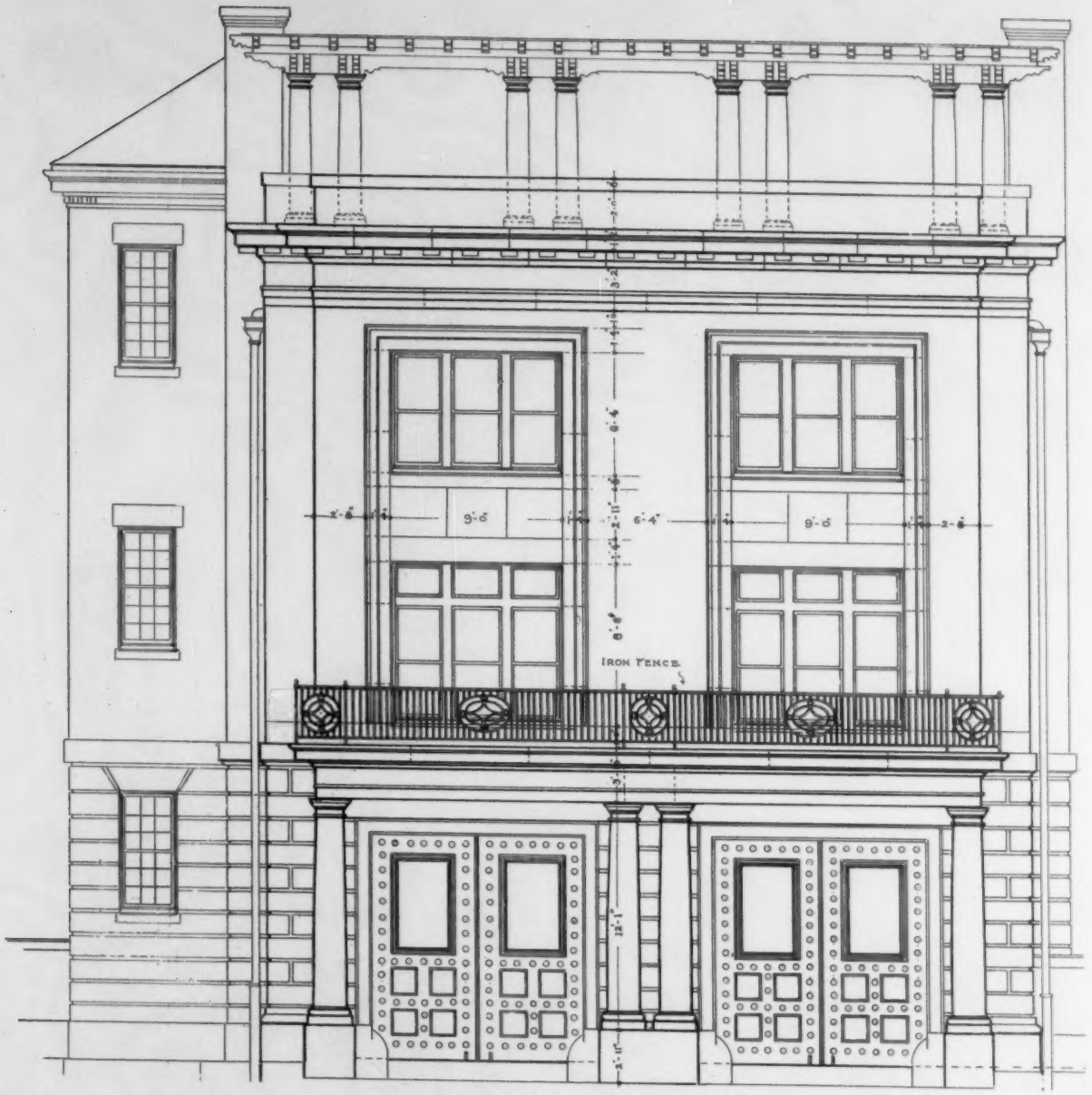


FRONT ELEVATION.

← CARNEGIE LIBRARY BUILDING, SEDALIA, MISSOURI.

MAURAN, RUSSELL & GARDEN, ARCHITECTS, ST. LOUIS, MO.

UNIV. OF MICH.



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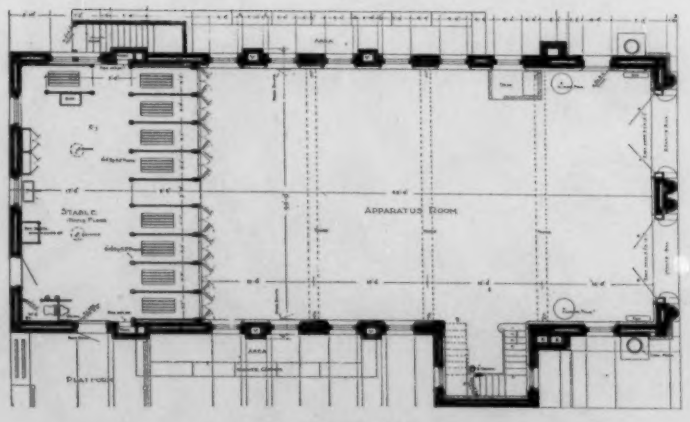
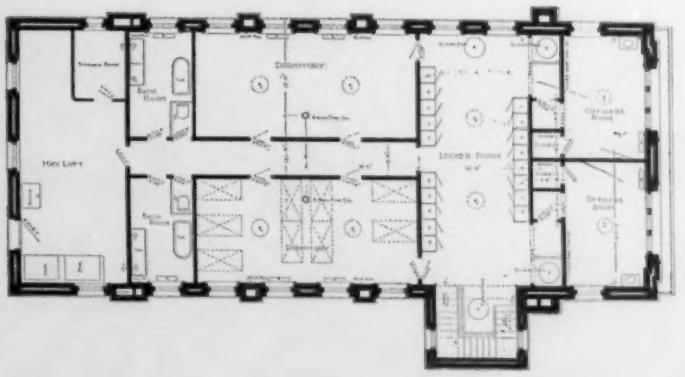


FIRST FLOOR.



SECOND FLOOR.

FIRE ENGINE HOUSE, BOSTON, MASS.

JOHN A. FOX, ARCHITECT.

UNIV. OF MICH.

Scale: 1/2 in. = 1 foot.

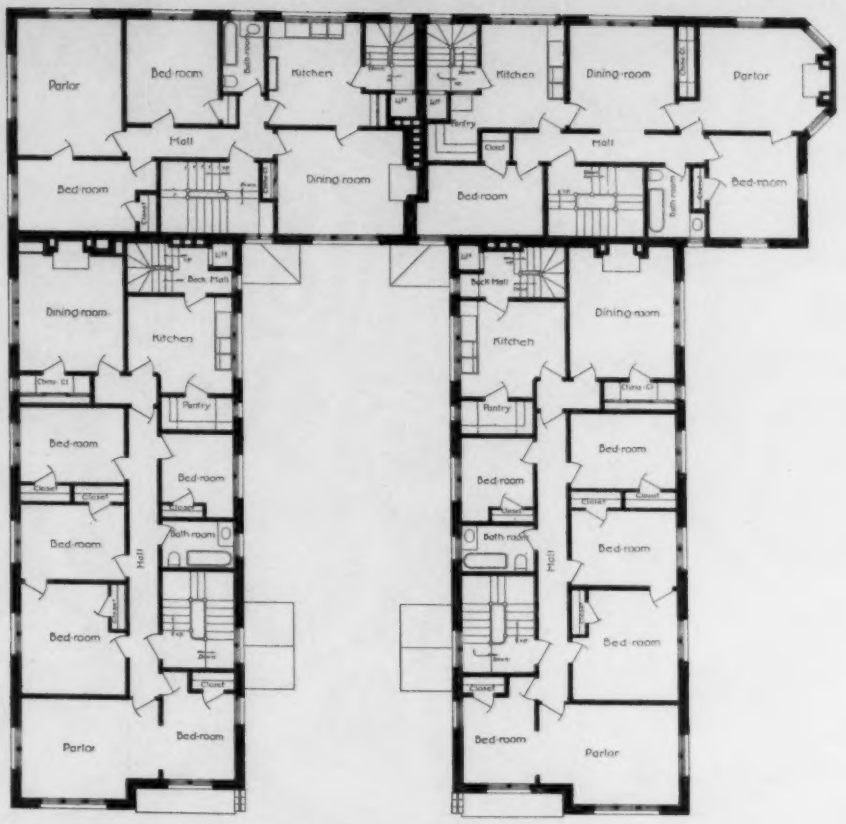
ONE HALF ELEVATION.

SECTION.

ONE HALF PLAN OF BELFRY.

DETAILS, SUNDAY-SCHOOL BUILDING, FIRST BAPTIST CHURCH, FRANKLIN, PA.

BEEZER BROTHERS, ARCHITECTS.



SECOND FLOOR PLAN.

FIRST FLOOR PLAN.

APARTMENT HOUSE, ASHMONT, MASS.

EDWIN J. LEWIS, ARCHITECT.

UNIV. OF MICH.